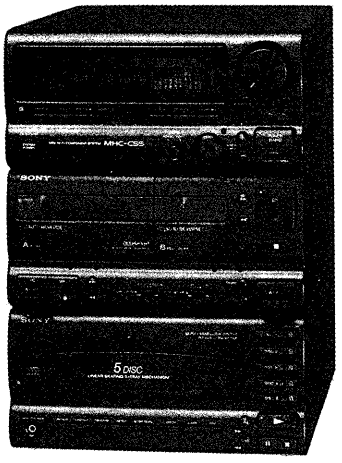
HCD-C55

SERVICE MANUAL

US Model
Canadian Model



- HCD-C55 is the tuner, CD, deck and amplifier in MHC-C55.

Dolby noise reduction manufactured under license from Dolby Laboratories Licensing Corporation.
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SPECIFICATIONS

AUDIO POWER SPECIFICATIONS

POWER OUTPUT AND TOTAL HARMONIC DISTORTION:
With 6 ohm loads both channels driven, from 80 – 20,000 Hz; rated 40 watts per channel minimum RMS power, with no more than 0.9% total harmonic distortion from 250 milliwatts to rated output.

CD player section

System: Compact disc digital audio system
Laser: Semiconductor laser
Wavelength: 780 – 790 nm
Frequency response: 2 Hz – 20 kHz
Signal-to-noise ratio: More than 95 dB
Dynamic range: More than 90 dB

Tuner section

FM stereo, FM/AM superheterodyne tuner

FM tuner section

Tuning range: 87.5 – 108.0 MHz
Antenna terminals: 75 ohm unbalanced
Intermediate frequency: 10.7 MHz

CD Section	Model Name Using Similar Mechanism	NEW
	CD Mechanism Type	CDM33-5BD3B
	Base Unit Name	BU-5BD3B
Tape deck Section	Model Name Using Similar Mechanism	TC-WR445
	Tape Transport Mechanism Type	TCM-202WR2

AM tuner section

Tuning range
AM: 530 – 1,710 kHz (with the AM tuning interval set at 10 kHz)
531 – 1,710 kHz (with the AM tuning interval set at 9 kHz)
Antenna: AM loop antenna, External antenna terminals
Intermediate frequency: 450 kHz

Amplifier section

Continuous RMS power output:
40 + 40 watts (6 ohms, at 40 – 20,000 Hz, 0.9% THD)
45 + 45 watts (6 ohms, at 1 kHz, 5% THD)
Inputs
MD/VIDEO IN (phono jack): sensitivity 450 mV, impedance 47 kilohms

—Continued next page—

使用時は添付資料も参照のこと
Refer to the additional documents.

MINI HiFi COMPONENT SYSTEM

SONY®

Outputs
MD/VIDEO OUT (phono jack):
sensitivity 450 mV,
impedance 47 kilohms
HEADPHONES (stereo minijack):
accepts headphones of 8 ohms or more.
SPEAKER:
accepts speakers of 6 to 16 ohms.

Tape player section

Recording system
4-track 2-channel stereo
Frequency response
(DOLBY NR OFF)
40 – 13,000 Hz (±3 dB),
using Sony TYPE I cassette
40 – 14,000 Hz (±3 dB),
using Sony TYPE II cassette
Wow and flutter
0.1% WRMS±0.3% (DIN)

Supplied accessories

AM loop antenna (1)
Remote commander RM-S545 (1)
Sony SUM-3 (NS) batteries (2)
FM antenna (1)
Speaker cords (2)

General

Power requirements
120 V AC, 60Hz
Power consumption
80 watts (U.S.A. model)
90 watts (Canadian model)
Dimensions
Approx. 225 x 330 x 320 mm (w/h/d)
(8 7/8 x 13 x 12 5/8 inches)
Mass Approx. 9.2 kg
(20 lb 5 oz)

Design and specifications are subject to change without notice.

CAUTION

Use of controls or adjustments or performance of procedures other than those specified herein may result in hazardous radiation exposure.

SAFETY-RELATED COMPONENT WARNING!!

COMPONENTS IDENTIFIED BY MARK ⚠ OR DOTTED LINE WITH MARK ⚠ ON THE SCHEMATIC DIAGRAMS AND IN THE PARTS LIST ARE CRITICAL TO SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY.

ATTENTION AU COMPOSANT AYANT RAPPORT À LA SÉCURITÉ!

LES COMPOSANTS IDENTIFIÉS PAR UNE MARQUE ⚠ SUR LES DIAGRAMMES SCHÉMATIQUES ET LA LISTE DES PIÈCES SONT CRITIQUES POUR LA SÉCURITÉ DE FONCTIONNEMENT. NE REMPLACER CES COMPOSANTS QUE PAR DES PIÈCES SONY DONT LES NUMÉROS SONT DONNÉS DANS CE MANUEL OU DANS LES SUPPLÉMENTS PUBLIÉS PAR SONY.

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SAFETY CHECK-OUT

After correcting the original service problem, perform the following safety check before releasing the set to the customer:
Check the antenna terminals, metal trim, "metallized" knobs, screws, and all other exposed metal parts for AC leakage. Check leakage as described below.

LEAKAGE TEST

The AC leakage from any exposed metal part to earth ground and from all exposed metal parts to any exposed metal part having a return to chassis, must not exceed 0.5 mA (500 microampers). Leakage current can be measured by any one of three methods.

1. A commercial leakage tester, such as the Simpson 229 or RCA WT-540A. Follow the manufacturers' instructions to use these instruments.
2. A battery-operated AC milliammeter. The Data Precision 245 digital multimeter is suitable for this job.
3. Measuring the voltage drop across a resistor by means of a VOM or battery-operated AC voltmeter. The "limit" indication is 0.75 V, so analog meters must have an accurate low-voltage scale. The Simpson 250 and Sanwa SH-63Trd are examples of a passive VOM that is suitable. Nearly all battery operated digital multimeters that have a 2 V AC range are suitable. (See Fig. A)

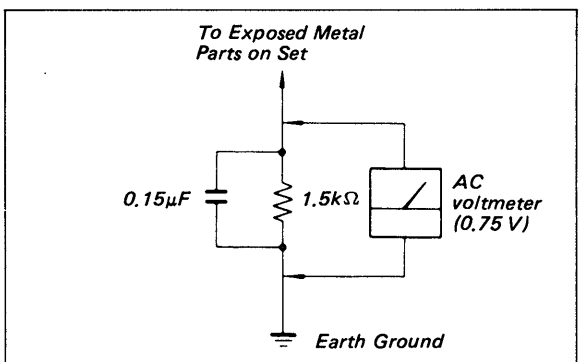


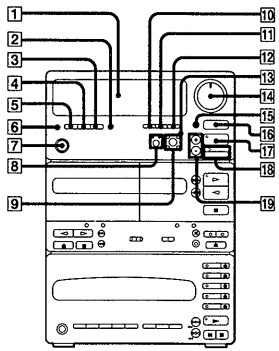
Fig. A. Using an AC voltmeter to check AC leakage.

Index to Parts and Controls

Refer to the pages indicated in parentheses for details on how to use the controls. Controls with an asterisk have indicators on themselves.

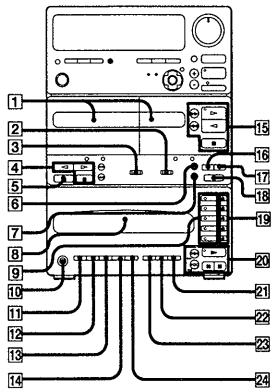
Front Panel

Amplifier/Tuner section



1 Display window (6, 7, 11, 15, 19, 21)
2 CLOCK SET button (6)
3 REC TIMER button (22)
4 DAILY button (21)
5 TIMER SET button (21)
6 Remote sensor
7 SYSTEM POWER switch (6)
8 DBFB button and NORMAL/HIGH indicators (18)
9 EQ CONTROL button (19)
10 S-SUR button (20)
11 EFFECT button (19)
12 EQ PRESET button (19)
13 OFF button (19)
14 VOLUME control (5, 7, 18)
15 MEMORY/NEXT button (6, 12, 20, 22)
16 FUNCTION button (7, 14, 23)
17 TUNER/BAND button (11, 16)
18 PRESET/TUNING button and PRESET indicator (11)
19 TUNER/TIMER (+/–) buttons (6, 11, 20, 22)

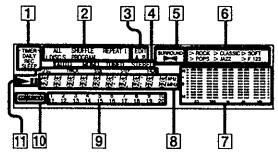
Tape player/CD player section



1 Cassette compartments (13)
2 DOLBY NR switch (13)
3 DIRECTION mode selector (13)
4 Tape operating buttons (for deck A)
▷ (front side play)* (13)
◁ (reverse side play)* (13)
■ (stop) (13)
▶▶ (fast rightward) (13)
◀◀ (fast leftward) (13)
5 ⏏ EJECT button (for deck A) (13)
6 PAUSE ▮▮ button* (13)
7 REC O button* (15)
8 Disc tray (7)
9 DISC 1 – 5 buttons* (7, 8)
10 HEADPHONES jack (stereo minijack) (18, 23)
11 CONTINUE button (8, 10, 16)
12 SHUFFLE button (9)
13 PROGRAM button (9, 16)
14 REPEAT button (10)
15 Tape operating buttons (for deck B)
▷ (front side play)* (13)
◁ (reverse side play)* (13)
■ (stop) (13)
▶▶ (fast rightward) (13)
◀◀ (fast leftward) (13)
16 HIGH SPEED DUBBING button* (17)
17 CD SYNCHRO button* (14)
18 ⏏ EJECT button (for deck B) (13)
19 OPEN/CLOSE ⏏ buttons (7, 14)
20 CD player operating buttons
▶ (play) (8, 15)
▮▮ (pause) (8, 15)
■ (stop) (8, 15)
⏮◀◀ ▶▶⏭ (manual search/AMS) (8)
21 EDIT button (15)
22 CLEAR button (10)
23 CHECK button (10)
24 MUSIC SCAN button (9)

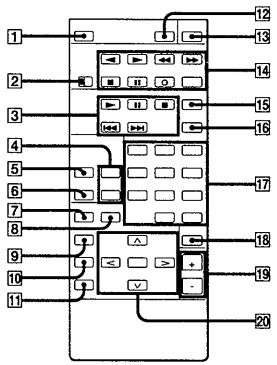
Display Window

HCD-C55



1 Timer indication (21)
2 CD play mode indication (7)
3 CD editing mode indication (10, 15)
4 Tuner indication (11)
5 SURROUND indication (20)
6 Audio emphasis indication (19)
7 Spectrum analyzer (19)
8 Frequency/playing time/tape counter indications (7, 11, 15)
9 Music calendar/preset radio station numbers (8, 12)
10 MEMORY indication (12)
11 CD play status indication (7)

Remote commander

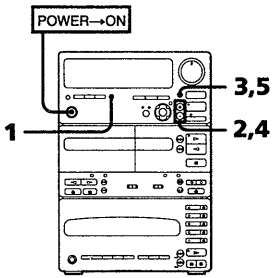


1 CLOCK DISPLAY button (6)
2 TAPE DECK A/B switch (14)
3 CD operating buttons (8)
4 PRESET –/+ buttons (12)
5 BAND button (11)
6 STEREO/MONO button (11)
7 EFFECT button (19)
8 DISPLAY button (19)
9 EQ PRESET button (19)
10 EQ MEMORY button (20)
11 S-SUR button (20)
12 SLEEP button (21)

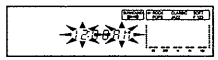
continue to next page →

Setting the Clock

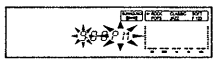
The built-in clock shows the time in the display even if the power is off. You need to set the clock to enjoy the timer-activated features of your stereo system.
Use the buttons on the unit to do this operation.



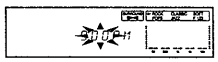
1 Press CLOCK SET.
The "AM" and hour indication begin flashing.



2 Set the current hour by pressing TUNER/TIMER (+/–) until the correct hour appears.

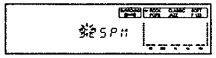


3 Press MEMORY/NEXT.
The minutes indication begins flashing.



4 Set the current minute by pressing TUNER/TIMER (+/–) until the correct minute appears.

5 Press MEMORY/NEXT.
The clock starts running and the upper dot flashes.
Use the time signal to set the clock accurately.



To check the time while power is on
Press CLOCK DISPLAY on the remote commander.
The current time appears for a few seconds.

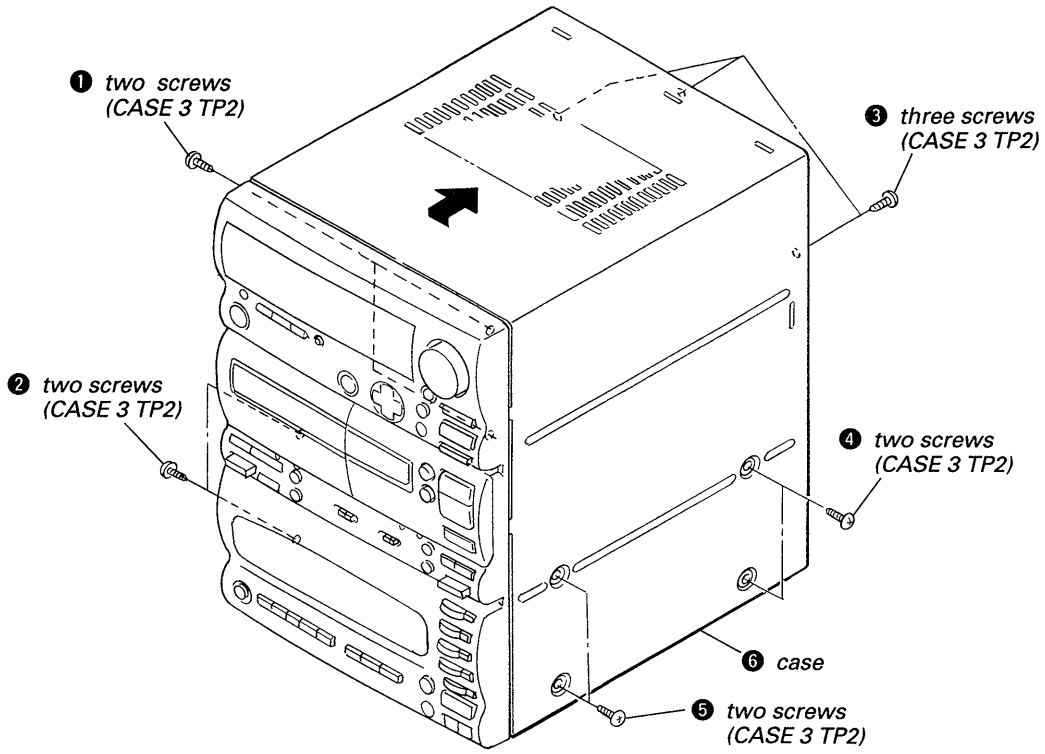
To correct the clock setting
Repeat steps 1 to 5.

This section is extracted from instruction manual.

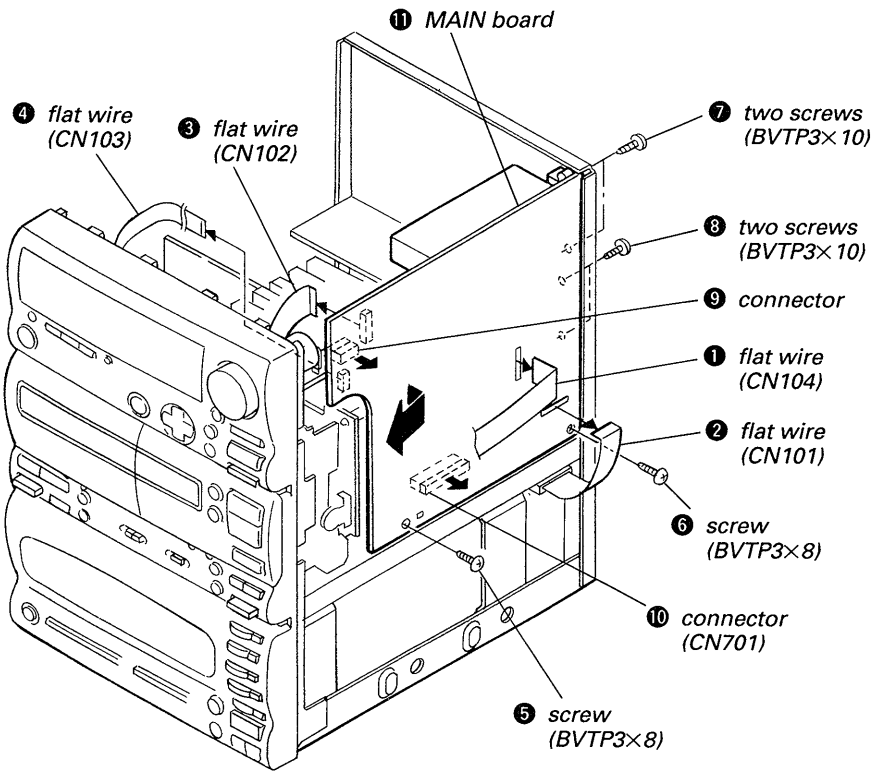
SECTION 2
DISASSEMBLY

NOTE: Follow the disassembly procedure in the numerical order given.

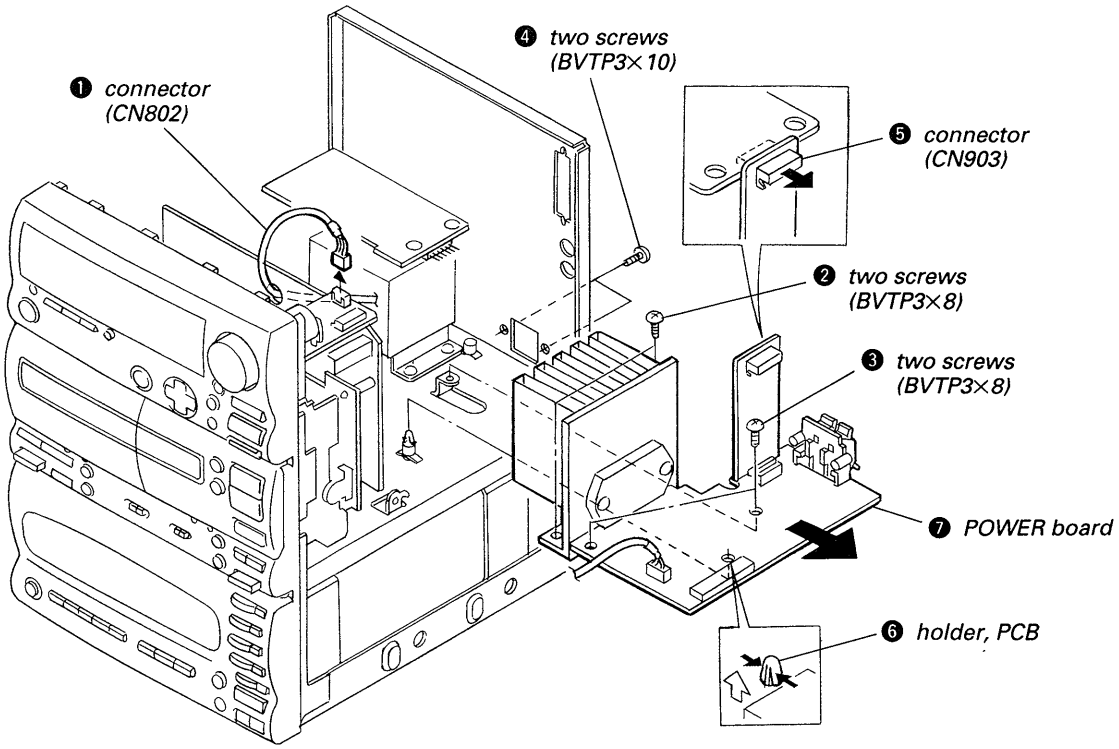
2-1. CASE



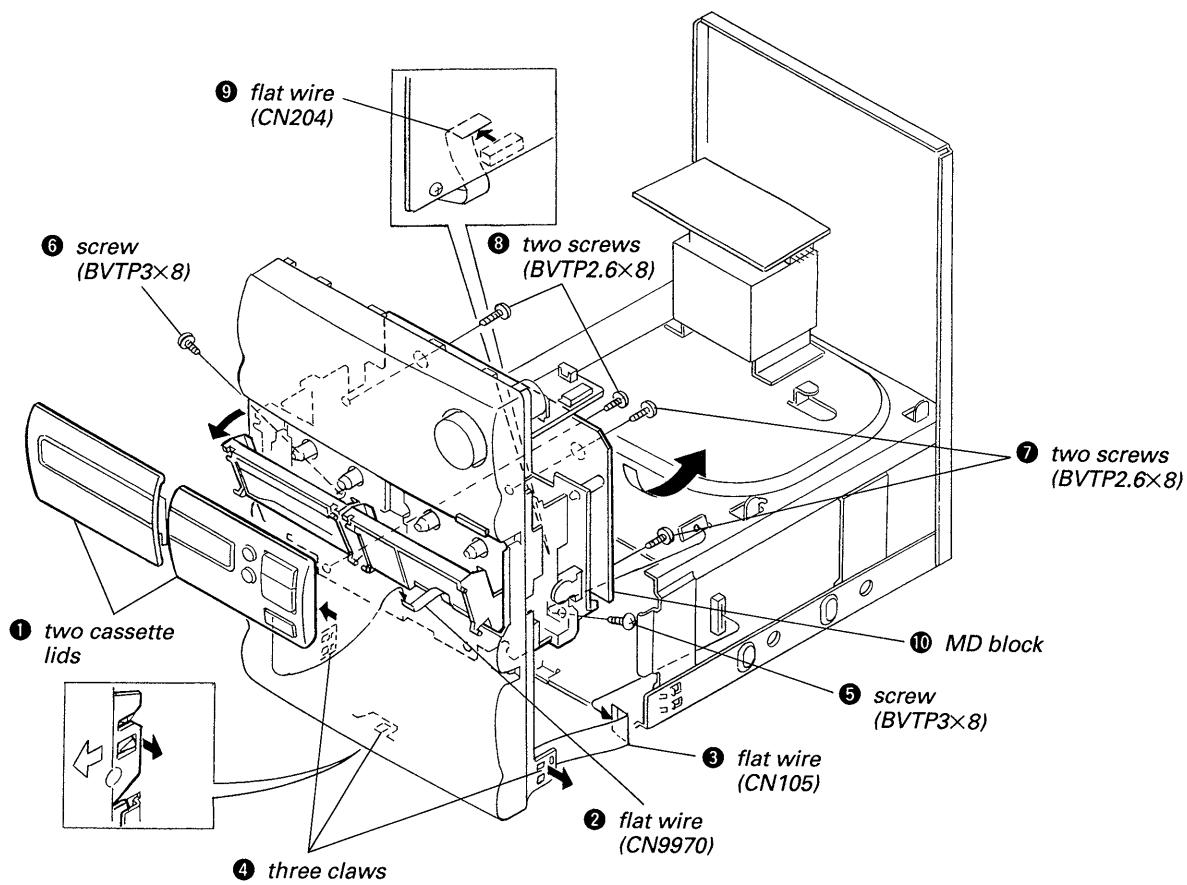
2-2. MAIN BOARD



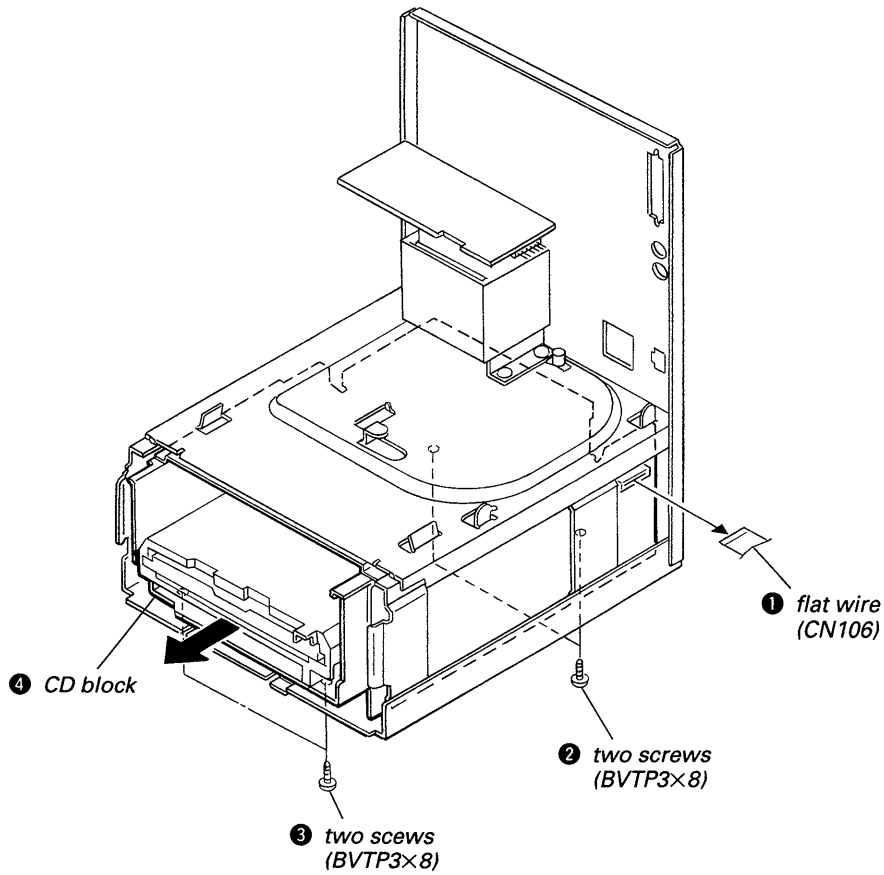
2-3. POWER BOARD



2-4. FRONT PANEL, MD BLOCK



2-5. CD BLOCK


❶ flat wire
(CN106)
❹ CD block
❷ two screws
(BVTP3×8)
❸ two scews
(BVTP3×8)

SECTION 3
ADJUSTMENTS

3-1. MECHANICAL ADJUSTMENTS

PRECAUTION

1. Clean the following parts with a denatured alcohol-moistened swab:
   record/playback/erase head pinch roller
   rubber belts capstan
   idlers
2. Demagnetize the record/playback head with a head demagnetizer. (Head demagnetizer do not approach for the erase head.)
3. Do not use a magnetized screwdriver for the adjustment.
4. After the adjustments, apply suitable locking compound to the parts adjusted.
5. The adjustments should be performed with the rated power supply voltage unless otherwise noted.

Torque Measurement

Torque	Torque meter	Meter reading
Forward	CQ-102C	28 to 60g • cm (0.39 to 0.83oz • inch)
Forward back tension	CQ-102C	2 to 6g • cm (0.028 to 0.083 oz • inch)
Reverse	CQ-102RC	28 to 60g • cm (0.39 to 0.83 oz • inch)
Reverse back tension	CQ-102RC	2 to 6g • cm (0.028 to 0.083 oz • inch)
FF/REW	CQ-201B	70 to 140g•cm (0.98 to 1.94 oz•inch)

3-2. ELECTRICAL ADJUSTMENTS

●TOOLS

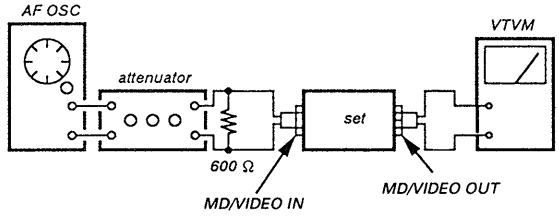
Description	Part No.	Remarks
21P L=500 (1mm)	J-2501-075-A	Extension Cable (MAIN board CN102 to FL board CN901
7P L=500 (1.25mm)	J-2501-058-A	Extension Cable (MAIN board CN103 to FL board CN902
19P L=300 (1.25mm)	J-2501-011-B	Extension Cable (MAIN board CN104 to CD board CN106

TAPE SECTION

PRECAUTION

1. The adjustment should be performed in the publication. (Be sure to make playback adjustment at first.)
2. The adjustments and measurement should be performed for both L-CH and R-CH.
   ● Switch position
   DOLBY NR switch : OFF
   DIRECTION switch : ⇄
   FUNCTION switch : OFF

– Record Mode –



Test Tape

Tape	Contents	Use
P-4-A100	10kHz, – 10dB	Azimuth Adjustment
P-4-L300	315Hz, 0dB	PB Level Adjustment
WS-48B	3kHz, 0dB	Tape Speed Adjustment

0dB=0.775V

Test Mode

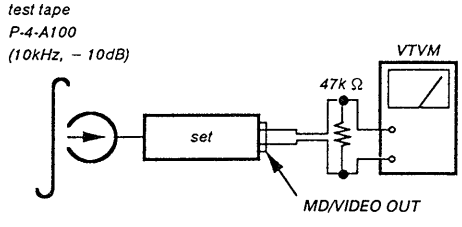
1. Short the JW998 and JW999, before electrical adjustment. At first, all the fluorescent tubes light up, then the system returns to normal display.
2. To release the test mode, remove the short plug and turn off the power switch.
3. Remove the short plug after completion of adjustment.

Record/Playback Head Azimuth Adjustment

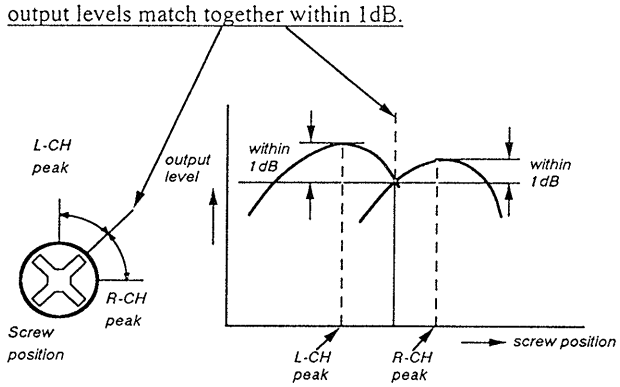
DECK-A DECK-B

Procedure :

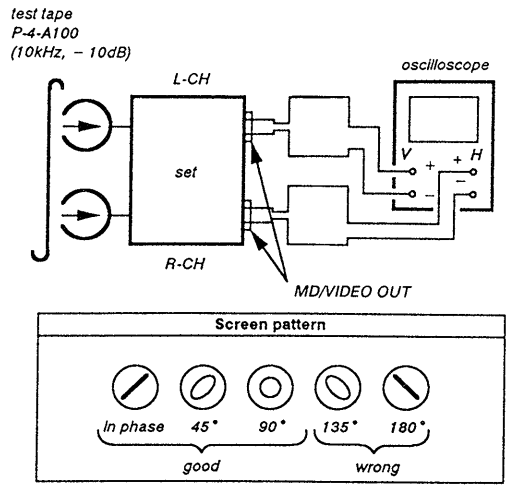
1. Forward playback Mode



2. Turn the adjustment screw for the maximum output levels. If these levels do not match, turn the adjustment screw until both of output levels match together within 1dB.

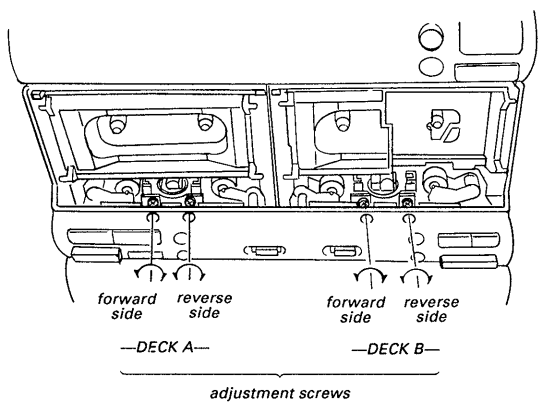


3. Playback Mode



4. Change the reveres playback mode and repeat the steps 1 to 3.
5. After the adjustment, lock the adjustment screws with suitable locking compound.

Adjustment Location : – record/playback head –

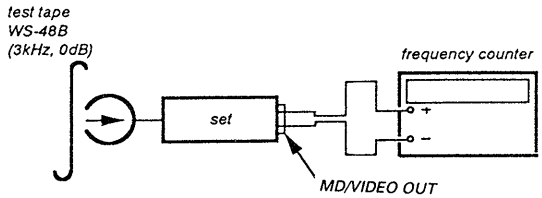


Tape Speed Adjustment

DECK-A DECK-B

Procedure :

– Forward Playback Mode –



(high speed adjustment)

1. Connect ㉖ pin of IC801 to ground.
2. Set to FWD playback mode.
3. Press the SYNCRO DUBBING switch.
4. Adjust RV652 so that the frequency counter reading becomes 6000 ± 30 Hz.

(normal speed adjustment)

1. Set to FWD playback mode.
2. Adjust RV651 so that the frequency counter reeding becomes 3,000 ± 10Hz.

Frequency difference between the beginning and the end of the tape should be within 3%.
Frequency difference between the deck-A and deck-B the beginning of the tape should be within 1.5%.

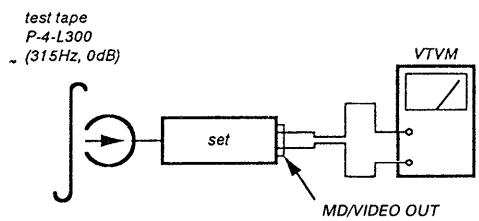
Adjustment Location : AUDIO board

Playback Level Adjustment

DECK-A DECK-B

Procedure :

– Forward Playback Mode –



Adjust deck-A is RV311(L-CH) and RV411(R-CH), deck-B is RV301(L-CH) and RV401(R-CH) so the VTVM reading becomes the adjustment limits below.

Adjustment Value :

MD/VIDEO OUT level : –8.7 ± 0.5dB (0.269 to 0.301V)

Level difference between channels : within 0.5dB

Confirm the LINE OUT level does not change in playback mode while changing the mode from playback to stop several times.

Adjustment Location : AUDIO board

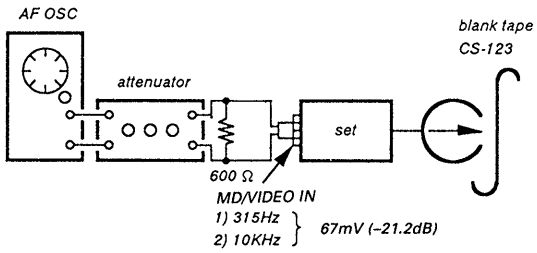
Record Bias Adjustment DECK-B

Setting :

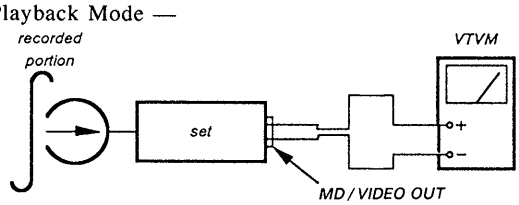
REC LEVEL control : standard record position (Refer to page 7.)

Procedure :

1. FUNCTION : MD/VIDEO position
   — Record Mode —



2. FUNCTION : TAPE position
   — Playback Mode —



Confirm that the 10kHz playback output is 0 ± 0.5dB relative to the 315Hz output. If necessary, adjust RV341(L-CH), RV441(R-CH) and repeat the steps given above.

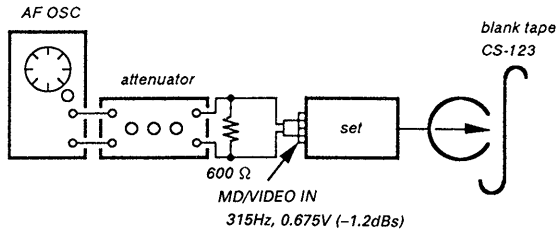
Adjustment Location : AUDIO board

Record Level Adjustment DECK-B

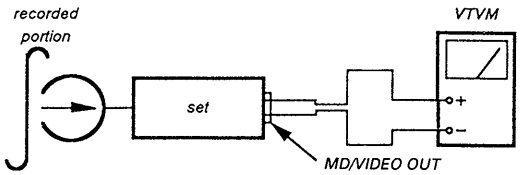
Setting :

Procedure :

1. FUNCTION : MD/VIDEO position
   — Record Mode —



2. FUNCTION : TAPE position
   — Playback Mode —



Confirm playback the tape recorded become adjustment level as follows.

If necessary, adjust RV441 (L-CH), RV341 (R-CH) and repeat the steps 1 and 2.

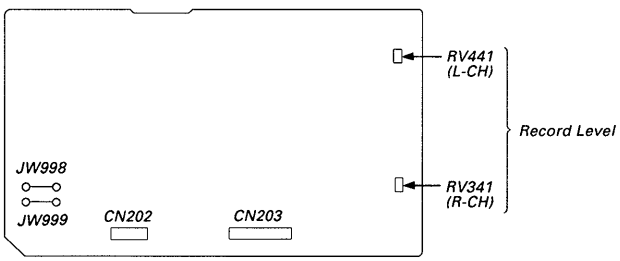
Adjustment Value :

MD/VIDEO OUT level : –1.2 ± 0.5dB (0.638 to 0.715V)

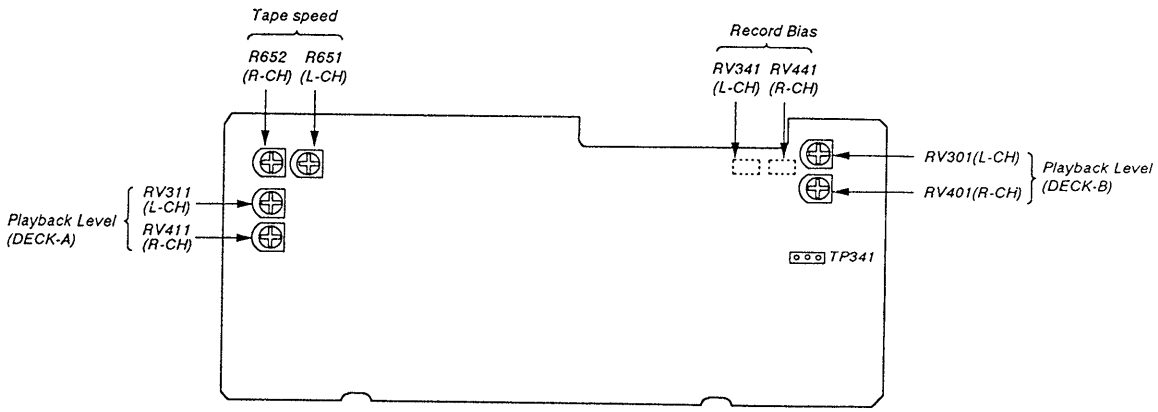
Adjustment Location : TC board

Adjustment Location :

[TC BOARD] (Component side)



[AUDIO BOARD] (Component side)



RADIO SECTION

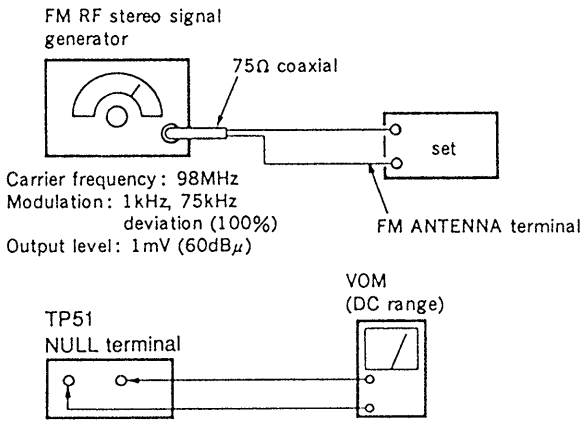
Precautions in Repairing

If the front end unit fails, it is difficult to repair the inner circuits, so replace the entire front end unit.

FM SECTION

FM Discriminator Adjustment (NULL Adjustment)

Setting :
BAND : FM

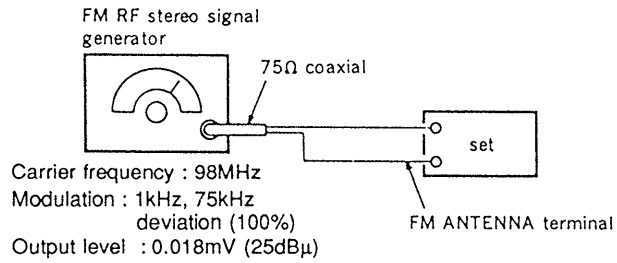


Procedure :
1. Tune the set to 98MHz.
2. Adjust IFT51 for 0Vdc reading on the VOM.

Note : FM Tuning Level adjustment should be made after FM discriminator alignment.

FM Tuned Indication Lighting Level

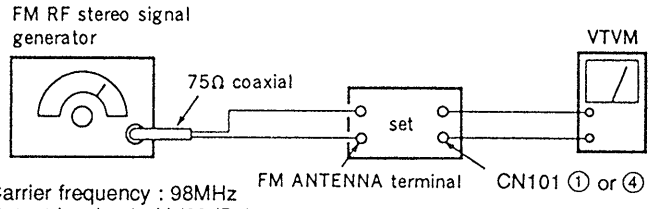
Setting :
BAND : FM



Procedure :
1. Tune the set to 98MHz.
2. Adjust RV52 so that the TUNED indicator goes on.

FM Stereo Separation Adjustment

Setting :
BAND : FM



Carrier frequency : 98MHz
Output level : 1mV (60dBμ)
Modulation : L+R 33.75kHzdeviation
L–R 33.75kHz deviation
Pliot Siganl 19kHz 7.5kHz deviation

Procedure :
Tune the set to 98MHz.

FM stereo Signal generator output channel	VTVM connection	VTVM reading (dB)
L-CH	L-CH	Ⓐ
R-CH	L-CH	Ⓑ Adjust RV53 for minimum reading.
R-CH	R-CH	Ⓒ
L-CH	R-CH	Ⓓ Adjust RV53 for minimum reading.

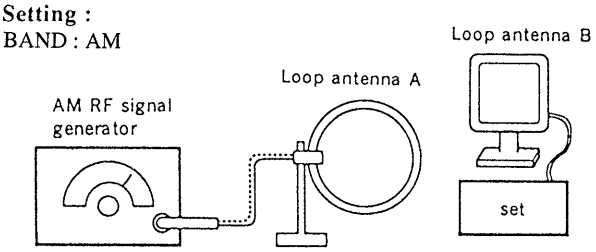
L-CH Stereo separation : Ⓐ – Ⓑ
R-CH Stereo separation : Ⓒ – Ⓓ

The separations of both channels should beequal.

AM SECTION

AM Tuned Indication Lighting Level

Setting :
BAND : AM

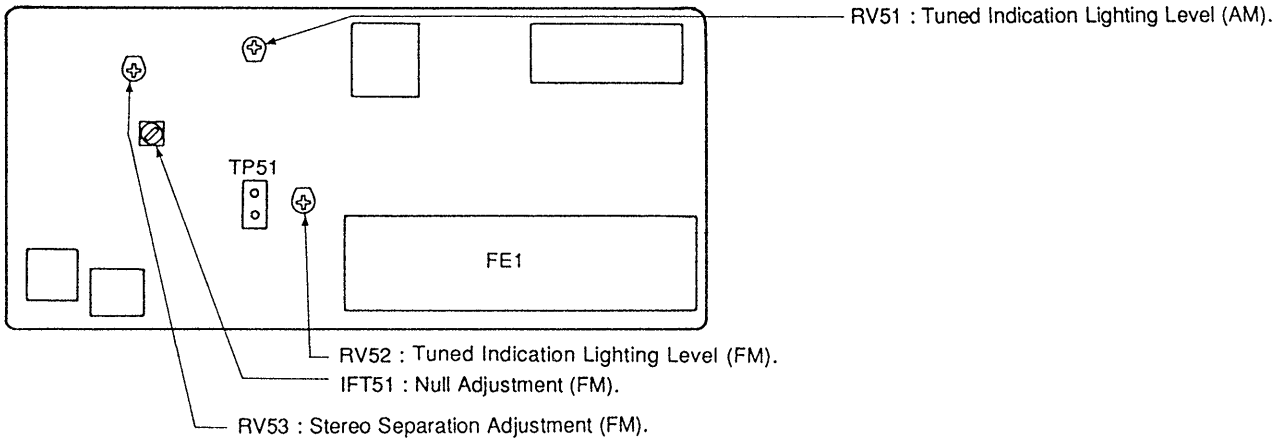


Carrier frequency : 1050kHz
Modulation : 400Hz, 30% modulation

Procedure :
1. Set loop antenna A so that the loop antenna B input level becomes 55dBμ/m (0.6m V/m).
2. Tune the set to 1050kHz.
3. Adjust RV51 so that the TUNED indicator goes on.

Adjustment Location:

TCB BOARD
— Component Side —

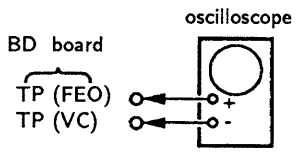

RV51 : Tuned Indication Lighting Level (AM).
TP51
FE1
RV52 : Tuned Indication Lighting Level (FM).
IFT51 : Null Adjustment (FM).
RV53 : Stereo Separation Adjustment (FM).

CD SECTION

Note :

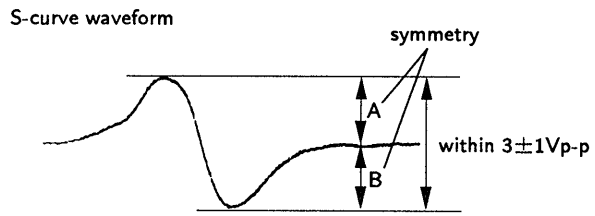
1. CD Block basically constructed to operate without adjustment. Therefore, check each item in order given.
2. Use YEDS-18 disc (3-702-101-01) unless otherwise indicated.
3. Use the oscilloscope with more than 10MΩ impedance.
4. Clean an object lens by an applicator with neutral detergent when the signal level is low than specified value with the following checks.

S-Curve Check



Procedure :

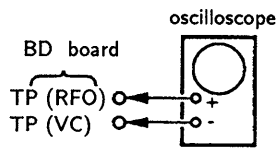
1. Connect oscilloscope to test point TP (FEO) on BD board.
2. Connect between test point TP (FES) and TP (VC) by lead wire.
3. Turned Power switch on.
4. Put disc (YEDS-18) in and turned Power switch on again and actuate the focus search. (actuate the focus search when disc table is moving in and out.)
5. Check the oscilloscope waveform (S-curve) is symmetrical between A and B. And confirm peak to peak level within 3±1Vp-p.



6. After check, remove the lead wire connected in step 2.

Note : • Try to measure several times to make sure that the ratio of A : B or B : A is more than 10 : 7.
• Take sweep time as long as possible and light up the brightness to obtain best waveform.

RF Level Check

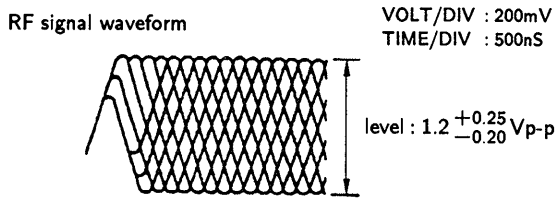


Procedure :

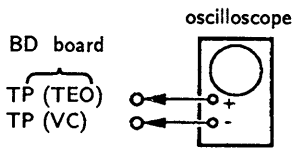
1. Connect oscilloscope to test point TP (RFO) on BD board.
2. Turned Power switch on.
3. Put disc (YEDS-18) in and playback.
4. Confirm that oscilloscope waveform is clear and check RF signal level is correct or not.

Note :

Clear RF signal waveform means that the shape "◇" can be clearly distinguished at the center of the waveform.

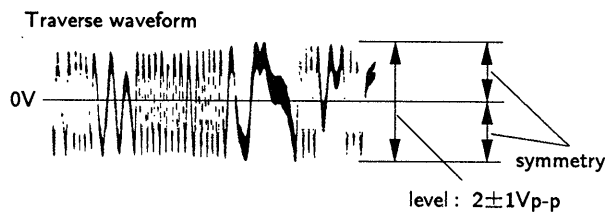


E-F Balance Check



Procedure :

1. Connect test point TP (ADJ) on CD board to ground and TP (TES) to TP (VC) with lead wire.
2. Connect oscilloscope to test point TP (TEO) on BD board.
3. Turned Power switch on.
4. Put disc (YEDS-18) in and playback.
5. Confirm that the osilloscope waveform is symmetrical on the top and bottom in relation to 0V, and check this level.

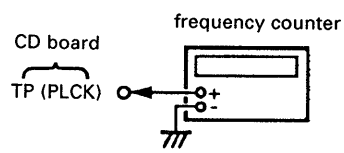


6. Remove the lead wire connected in step 1.

RF PLL Free-run Frequency Check

Procedure :

1. Connect frequency counter to test point (PLCK) with lead wire.



2. Turned Power switch on.
3. Confirm that reading on frequency counter is 4.3218MHz.

Focus/Tracking Gain

This gain has a margin, so even if it is slightly off. There is no problem.

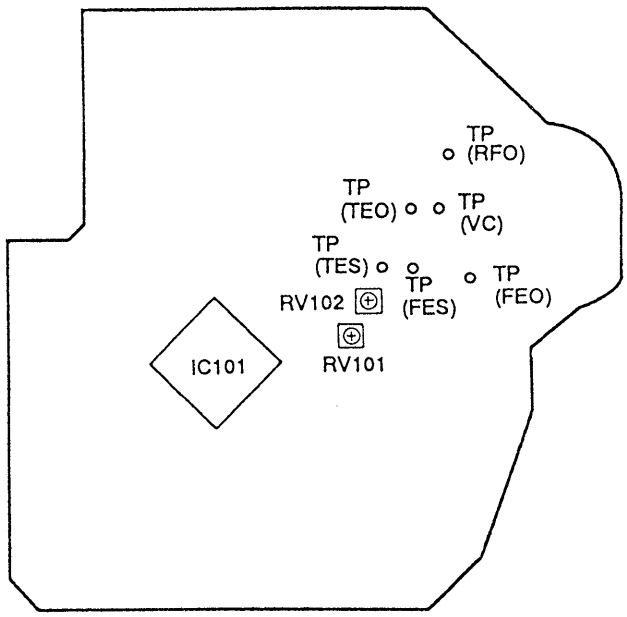
Therefore, do not perform, this adjustment.

Please note that it should be fixed to mechanical center position when you moved and do not know original position.

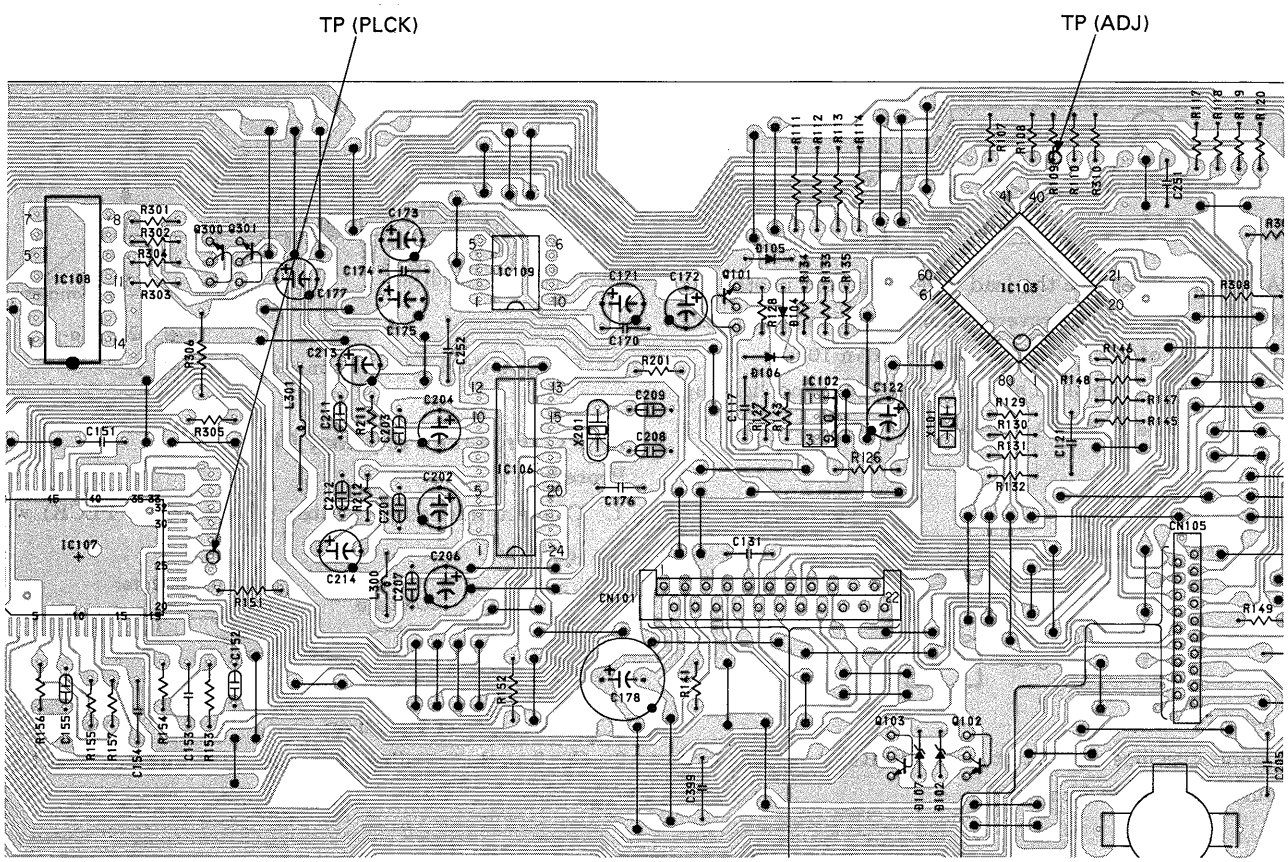
Adjustment Location :

Adjustment Location:

[BD BOARD] — CONDUCTOR SIDE —



[CD MAIN BOARD] — CONDUCTOR SIDE —



SECTION 4
DIAGRAMS

4-1. IC PIN FUNCTION

• IC103 (CD SYSTEM CONTROL) μPD78054GC-025-3B9

Pin No.	Pin Name	I/O	Description
1	DSENSOR	AI	Disc sensor input Disc is preset when input voltage is over AV_{Ref} / 2
2	PWMSEL1	AI	This input voltage determines PWM1 duty to move the tray horizontally
3	PWMSEL2	AI	This input voltage determines PWM2 duty to move the tray horizontally
4	AVSS		G / AD GND
5		O	Fixed at "Open"
6		O	Fixed at "Open"
7	AVREF	I	+5V
8			GND
9			Fixed at "Open"
10			Fixed at "Open"
11	SUBQ	I	Q data serial input from CXD2507
12			Fixed at "Open"
13	SQCLK	O	Clock output to CXD2507 (for reading subcode Q data)
14	DFCTSW	O	DEFECT Switch
15	PRGL	O	Serial data latch pulse to digital filter ⌐LATCH⌐
16		I	GND
17	DATA	O	Serial data output to CXD2507
18	CLK	O	Serial clock output to CXD2507
19	XLT	O	Serial data latch pulse output to CXD2507 ⌐_⌐
20	LDON	O	Laser diode ON / OFF output OFF ⌐ON
21	AMUTE	O	Muting ON / OFF output NOT ⌐MUTE
22	LSIOFF	O	Servo system power supply control
23		O	Fixed at "Open"
24		O	Fixed at "Open"
25		O	Fixed at "Open"
26		O	Fixed at "Open"
27	LED0	O	LED (DISC1) data output
28	LED1	O	LED (DISC2) data output
29	LED2	O	LED (DISC3) data output
30	LED3	O	LED (DISC4) data output
31	LED4	O	LED (DISC5) data output
32	GREEN	O	LED Scan output (GREEN)
33	VSS		GND
34	ORANGE	O	LED Scan output (ORANGE)
35		O	Fixed at "Open"
36	DPDAT0	O	Display data output
37	DPDAT1	O	Display data output
38	DPDAT2	O	Display data output
39	DPDAT3	O	Display data output
40	DPCLK	O	Display clock
41	MECARI	I	Normally 5V Connection to GND enables BD operation without mechanism
42	AFADJ	I	TEST mode input "L" at power on to enable the test
43	ADJ	I	TEST mode input At "L", GFS check is disabled
44	AGDSA	I	Normally 5V Connection to GND enables aging
45	PMOD0	I	Normally 5V Connection to GND disables reverse braking during tray horizontal control

Pin No.	Pin Name	I/O	Description
46	PMOD1	I	Normally GND Connection to 5V selects different specification for TOC reading
47		I	
48	LDIN	O	
49	LDOUT	O	
50	UP	O	
51	DOWN	O	
52	CLOSESW	I	Mechanism control sw terminal
53	OPENSW	I	Mechanism control sw terminal
54	INSW	I	Mechanism control sw terminal
55	OUTSW	I	Mechanism control sw terminal
56	COUNTSW	I	Mechanism control sw terminal
57	INITSW	I	Mechanism control sw terminal
58		I	
59	E.MRHI	I	"H": CD tray cover panel OPEN "L": CD tray cover panel CLOSE
60	$\overline{\text{RESET}}$	I	Reset
61	BSIN	I	AU BUS input
62		I	GND
63		I	GND
64		I	GND
65	BSOUT	O	AU BUS output
66	SENS	I	SENS Signal input from CXD2507, CXA1372
67	SCOR	I	Subcode Sync SO / SI detection
68	VDD		5V
69	X2		High frequency oscillator connect pin (4MHz)
70	X1	I	High frequency oscillator connect pin (4MHz)
71	IC		GND
72	XT2		Fixed at "Open"
73	XT1	I	GND
74	AVDD		5V
75	AVREF	I	5V
76	KEY0	AI	Key input terminal
77	KEY1	AI	Key input terminal
78	KEY2	AI	Key input terminal
79	KEY3	AI	Key input terminal
80	MIDSNS	AI	Sensor signal input to mechanism control

• **IC201 (SYSTEM CONTROL/MECHANISM CONTROL) M38122M2-067FP**

Pin No.	Pin Name	I/O	Description
1	KEY4	I	Key input terminal
2	ML	I	Fixed at "L"
3	MR	I	Fixed at "L"
4	AM5	I	Fixed at "L"
5	A HALF	I	Half pawl input for DECK-A
6	A SHUT	I	Take up side reel rotation detection at DECK-A
7	A SHUMIT	O	Take up side reel rotation detection at DECK-A
8	B SHUT	I	Take up side reel rotation detection at DECK-A
9	B SHUMIT	O	Take up side reel rotation detection at DECK-A
10	PB $\overline{A}$ / B	O	Playback A / B selector "L": DECK-A "H": DECK-B
11	EQ H / $\overline{L}$	O	Equalizer selector "L": Normal "H": High
12	RM	O	Recording mute ON / OFF "L": Mute OFF "H": Mute ON
13	REC / $\overline{PB}$	O	Recording / Playback selector "L": PB "H": REC
14	$\overline{LM}$	O	Line / Meter Mute terminal "L": Mute ON "H": Mute OFF
15	B BIAS	O	Bias ON / OFF at DECK-B "L": Bias OFF "H": Bias ON
16	AU-B IN	I	AU BUS input
17	PIN 2	I	Power ON / OFF (2)
18	PIN 1	I	Power ON / OFF (1)
19	RST	I	Reset terminal
20	NC	O	Fixed at "Open"
21	AU-B OUT	O	AU BUS output
22	X IN	I	System clock input terminal (4MHz)
23	X OUT	O	System clock output terminal (4MHz)
24	VSS	—	GND
25	B RELAY	O	Recording / Playback selector at DECK-B "H": REC
26	$\overline{T MODE}$	I	Test mode terminal "L": Test mode
27	B PLY SW	I	Playback switch at DECK-B "H": PB
28	A PLY SW	I	Playback switch at DECK-A "H": PB
29	NC	O	Fixed at "Open"
30	NC	O	Fixed at "Open"
31	NC	O	Fixed at "Open"
32	NC	O	Fixed at "Open"
33	NC	O	Fixed at "Open"
34	NC	O	Fixed at "Open"
35	NC	O	Fixed at "Open"
36	NC	O	Fixed at "Open"
37	NC	O	Fixed at "Open"
38	NC	O	Fixed at "Open"
39	NC	O	Fixed at "Open"
40	EZ	O	Not used
41	A PLAY	O	Not used
42	AFWD	O	LED driver
43	A REV	O	LED driver
44	B PLAY	O	Not used
45	B FWD	O	LED driver

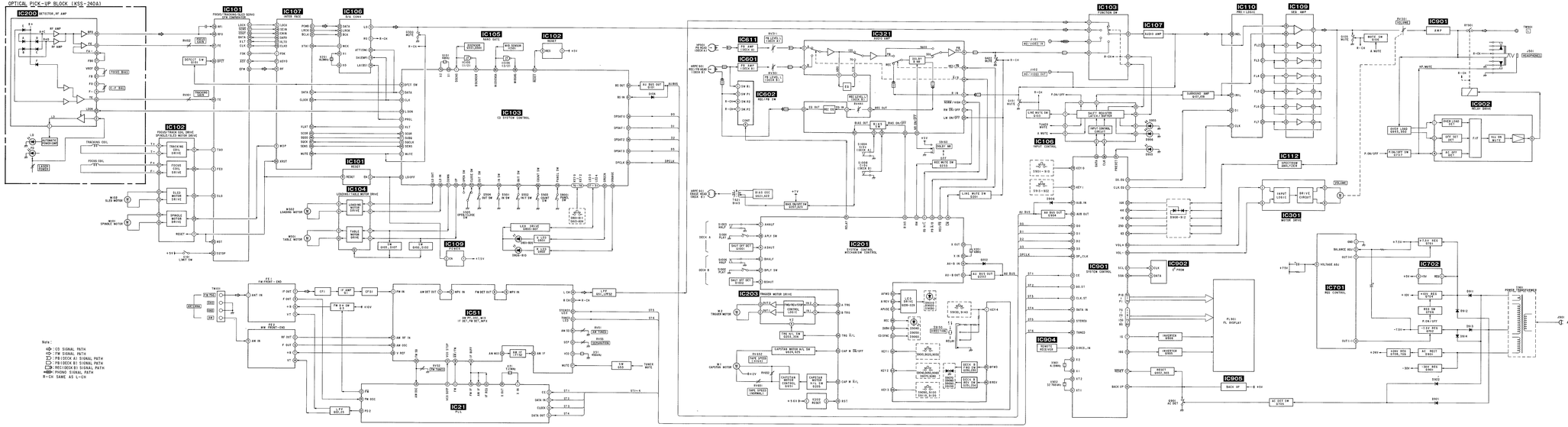
Pin No.	Pin Name	I/O	Description
46	B REV	O	LED driver
47	PAUSE	O	LED driver
48	REC	O	LED driver
49	DUBH	O	LED driver
50	NC	—	Not used
51	CD SYNC	O	LED driver
52	CAP M $\overline{H}$ / L	O	Capstan motor speed selector (0V=High, 5V=Normal)
53	CAP M $\overline{ON}$ / OF	O	Capstan motor ON / OFF "L": ON "H": OFF
54	TRG $\overline{H}$ / L	O	Trigger motor control "H": Low "L": High
55	A TRG	O	Trigger motor control
56	B TRG	O	Trigger motor control
57	VCC	—	Power supply (+5V)
58	VEE	—	Pull down power supply input
59	A VSS	—	Power supply (GND)
60	V REF	—	A / D Reference voltage (+5V)
61	B HALF	I	Half pawl input for DECK-B (REC pawl A / B side)
62	KEY 1	I	Key input terminal
63	KEY 2	I	Key input terminal
64	KEY 3	I	Key input terminal

• **IC901 (SYSTEM CONTROL) μPD78042GF-074-3B9**

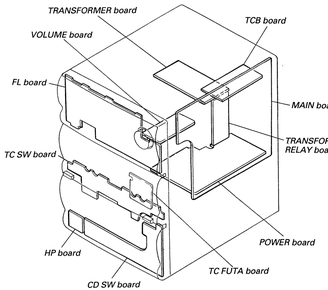
Pin No.	Pin Name	I/O	Description
1	7G	O	FL tube digit output
2	6G	O	FL tube digit output
3	5G	O	FL tube digit output
4	4G	O	FL tube digit output
5	3G	O	FL tube digit output
6	2G	O	FL tube digit output
7	1G	O	FL tube digit output
8	+5V	—	Microcomputer power (5V)
9	GND	—	GND
10	DO EQ	O	Data output to NJU7305
11	CLK EQ	O	Serial clock output to NJU7305
12	DO ST	O	Serial data output to LC7218 (PLL IC)
13	CLK ST	O	Serial clock output to LC7218 (PLL IC)
14	DATA IN	I	Serial data input from LC7218 (PLL IC)
15	CE	O	Chip select to LC7218 (PLL IC)
16	BACK UP	I	Backup signal DET
17	RESET	I	Reset
18	TUNED	I	Tuning signal from tuner block (L···TUNING)
19	STEREO	I	Stereo signal from tuner block (L···FM STEREO received)
20	GND	—	GND
21	DEST	I	Country select
22	16K	I	Spectrum analyzer signal input (16kHz)
23	4K	I	Spectrum analyzer signal input (4kHz)
24	1K	I	Spectrum analyzer signal input (1kHz)
25	250	I	Spectrum analyzer signal input (250Hz)
26	63	I	Spectrum analyzer signal input (63Hz)
27	Key 1	I	Key input terminal
28	Key 0	I	Key input terminal
29	AVDD	—	A / D power for key input (5V)
30	AV REF	—	A / D reference voltage (5V)
31	XT 1	I	Crystal connection pin for subclock oscillator (32.768kHz)
32	XT 2	O	Crystal connection pin for subclock oscillator (32.768kHz)
33	VSS	—	GND
34	X 1	I	Crystal connection pin for Main clock oscillator (4.19MHz)
35	X 2	O	Crystal connection pin for Main clock oscillator (4.19MHz)
36	SDA	O	ROM data
37	SCL	O	ROM clock
38	CLK	O	Serial clock output to M50253 (Serial in / Parallel out)
39	DATA	O	Serial data output to M50253 (Serial in / Parallel out)
40	D 3	I	Display data 3 from μPD78052 or μPD78055 (CD controller)
41	D 2	I	Display data 2 from μPD78052 or μPD78055 (CD controller)
42	D 1	I	Display data 1 from μPD78052 or μPD78055 (CD controller)
43	D 0	I	Display data 0 from μPD78052 or μPD78055 (CD controller)
44	DP-CLK	I	Serial clock from μPD78052 or μPD78055 (CD controller)
45	SIRCS-IN	I	SIRCS input

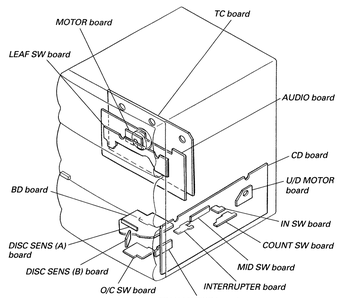
Pin No.	Pin Name	I/O	Description
46	AUB-OUT	O	AU BUS output
47	AUB-IN	I	AU BUS input
48	IC	—	GND
49	VOL+	O	Volume control up
50	VOL–	O	Volume control down
51	PRESET	O	LED driver
52	VDD	—	Microcomputer power (5V)
53	P18	O	FL tube segment output
54	P17	O	FL tube segment output
55	P16	O	FL tube segment output
56	P15	O	FL tube segment output
57	P14	O	FL tube segment output
58	P13	O	FL tube segment output
59	P12	O	FL tube segment output
60	P11	O	FL tube segment output
61	P10	O	FL tube segment output
62	P9	O	FL tube segment output
63	P8	O	FL tube segment output
64	P7	O	FL tube segment output
65	P6	O	FL tube segment output
66	P5	O	FL tube segment output
67	P4	O	FL tube segment output
68	P3	O	FL tube segment output
69	P2	O	FL tube segment output
70	P1	O	FL tube segment output
71	–30V	—	Minus voltage for FL tube
72	16G	O	FL tube digit output
73	15G	O	FL tube digit output
74	14G	O	FL tube digit output
75	13G	O	FL tube digit output
76	12G	O	FL tube digit output
77	11G	O	FL tube digit output
78	10G	O	FL tube digit output
79	9G	O	FL tube digit output
80	8G	O	FL tube digit output

4-2. BLOCK DIAGRAM



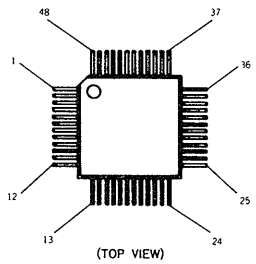
4-3. CIRCUIT BOARDS LOCATION





4-4. SEMICONDUCTOR LEAD LAYOUTS

CXA1372AQ



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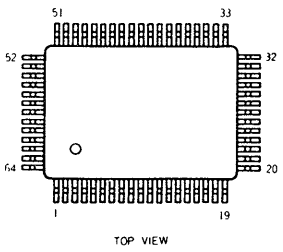
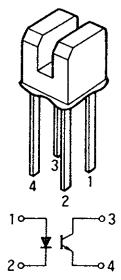
VXD2507Q



GP1S24



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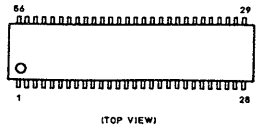

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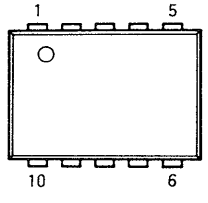

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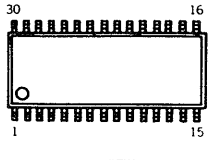

LB1639
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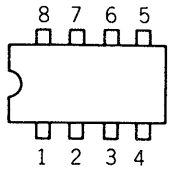

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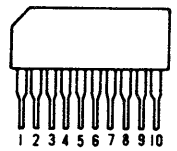

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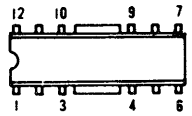

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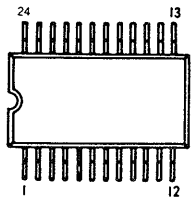
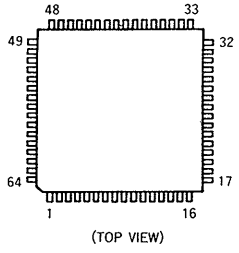


M38122M2-067FP



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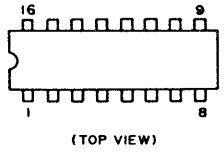
MC14052BCP



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M5230L-A
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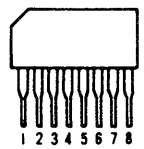
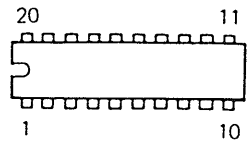
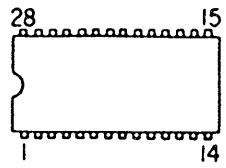


M5289P



NJU7305L



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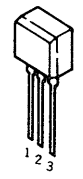
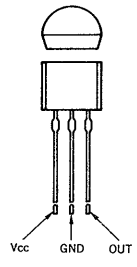


1 : Vcc
2 : GND
3 : Out put

PST600D-T



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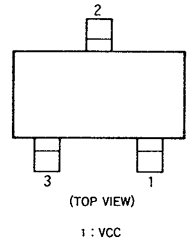
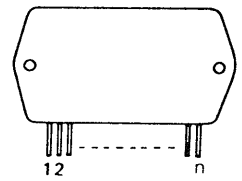


1 : VCC
2 : GND
3 : OUT

STK4152II



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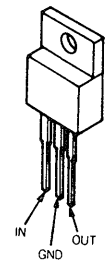

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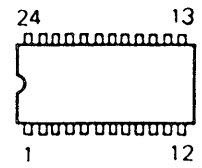

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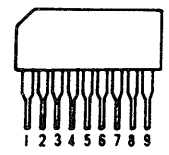
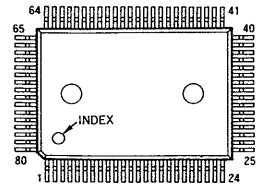


UPD78042GF-074-3B9



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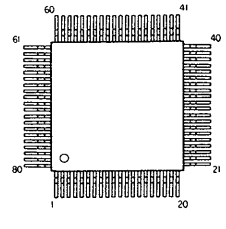

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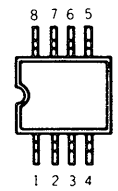

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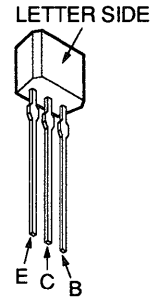
2SC3623A-LK



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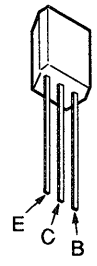
2SC2603-EF
2SC3622A-LK
DTA114ES
DTA114YS
DTA124ES
DTC114ES
DTC124ES
DTC144ES



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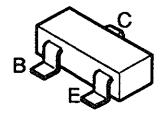
2SA1678
2SC2814-F4
2SC3398
2SC4154F
2SC4398
2SC4666BB-TP1
DTC144EK



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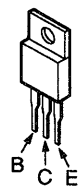
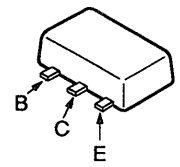
2SD2012



2SB798-DLDK



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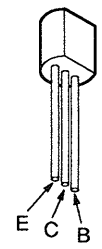
2SD1387-3



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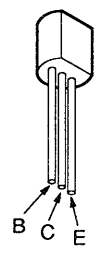

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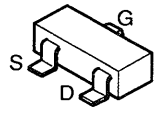
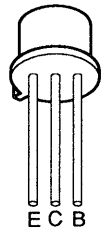
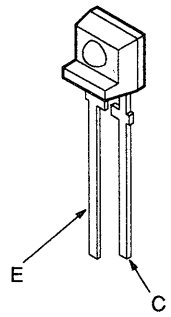


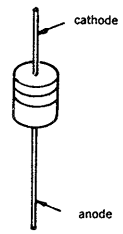
2SK246-Y



TPS626-B



11ES2
HZS30-2L
RD5.6ESB
RD6.8ESB3
UZ-4.3BSB
UZL-11H1
UZL-12M1
UZL-24L
UZL-6M2



1N4148M
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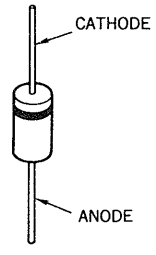
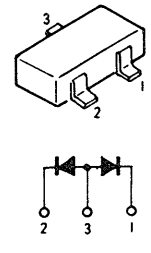
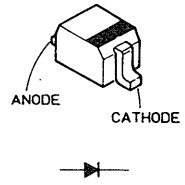
UZP-5.6B



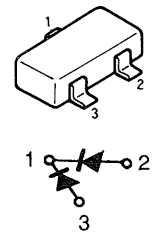
1S2836



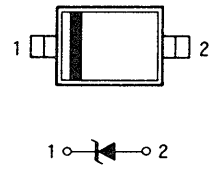
1SS352



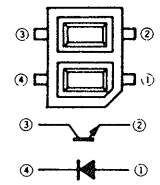
DCB010



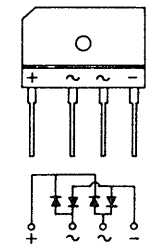
MA113-TX
MA8056



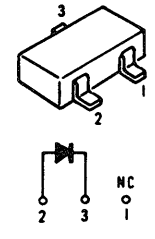
NJL5165K-A



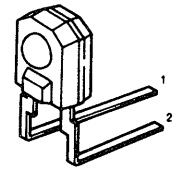
RBA-402



RD6.2M-B2

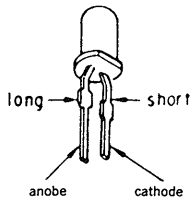


TLN117-B

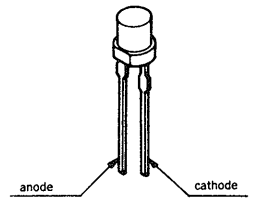


1. Emitter
2. Collector

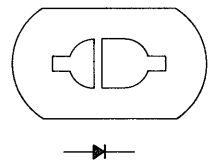
SEL2410E-C-TP6
SEL2910A-TP6
SEL3210S-CD



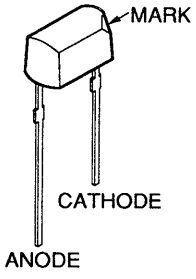
SEL3213C-D



SEL5220E
SEL5220S-TP15
SEL5420E-TP15
SEL5920A-TP15



SEL5220S-TH8C



4-5. PRINTED WIRING BOARDS—MAIN Section—

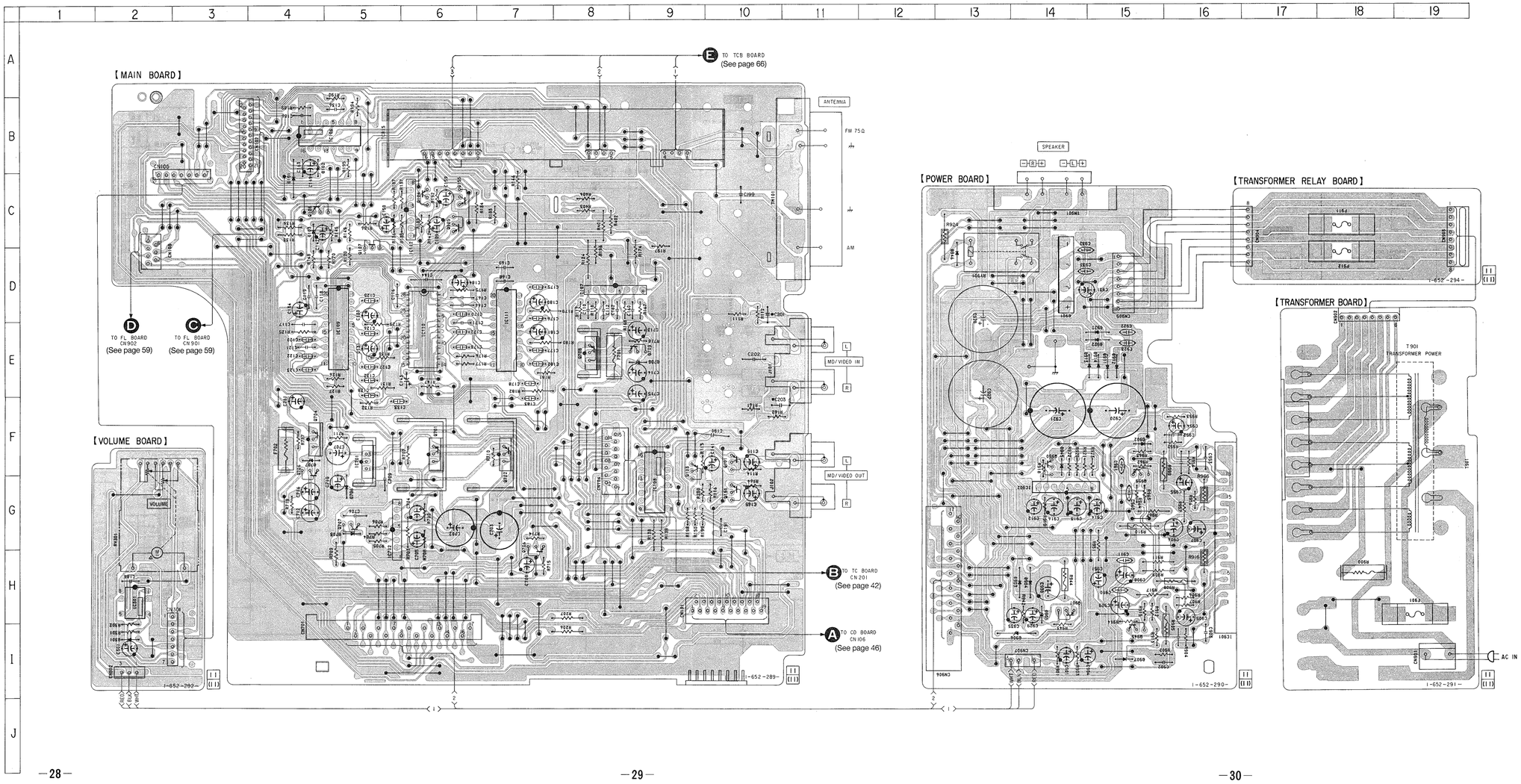
• See page 25 for Circuit Boards Location.
• See page 26, 27 for Semiconductor Lead Layouts.

• **Semiconductor Location**

Ref. No.	Location	Ref. No.	Location
D101	C-4	IC111	E-7
D102	B-4	IC112	C-6
D103	C-4	IC301	H-2
D301	I-2	IC701	F-5
D703	G-5	IC702	G-5
D706	G-5	IC901	H-16
D707	F-4	IC902	F-14
D708	E-9		
D901	I-14	Q101	F-10
D902	F-15	Q103	G-9
D903	H-14	Q105	C-6
D904	H-14	Q106	C-6
D905	H-14	Q107	C-5
D906	I-14	Q108	C-4
D907	I-15	Q151	G-10
D911	E-15	Q155	C-6
D912	E-15	Q701	G-6
D913	E-15	Q702	F-7
D914	E-15	Q704	F-4
D921	E-15	Q705	G-7
D922	E-15	Q706	G-4
D945	F-14	Q707	G-5
D946	D-13	Q708	E-8
		Q709	E-9
IC103	G-9	Q901	H-14
IC106	B-5	Q945	H-15
IC107	D-8	Q950	F-14
IC109	D-5	Q959	F-15
IC110	E-6		

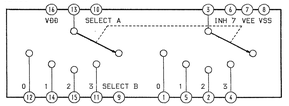
Note:

- ○—— : parts extracted from the component side.
- ▒▒▒ : Pattern on the side which is seen.
- ■ : parts mounted on the conductor side.

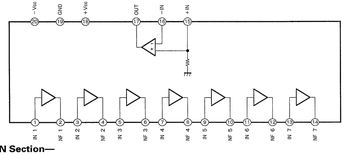


● IC Block Diagrams

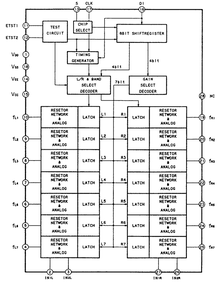
IC103 MC14052BCP



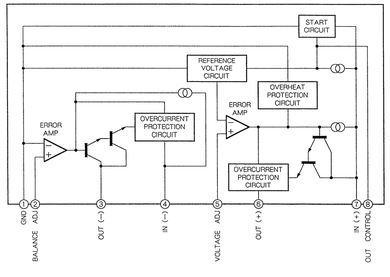
IC109, 111 M5289P



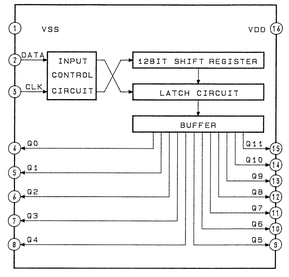
IC110 NJU7305L



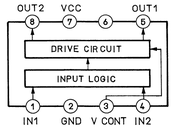
IC701 M5230L-A



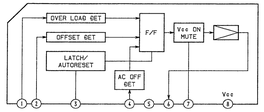
IC106 M50253P



IC301 LB1639



IC902 μPC1237HA



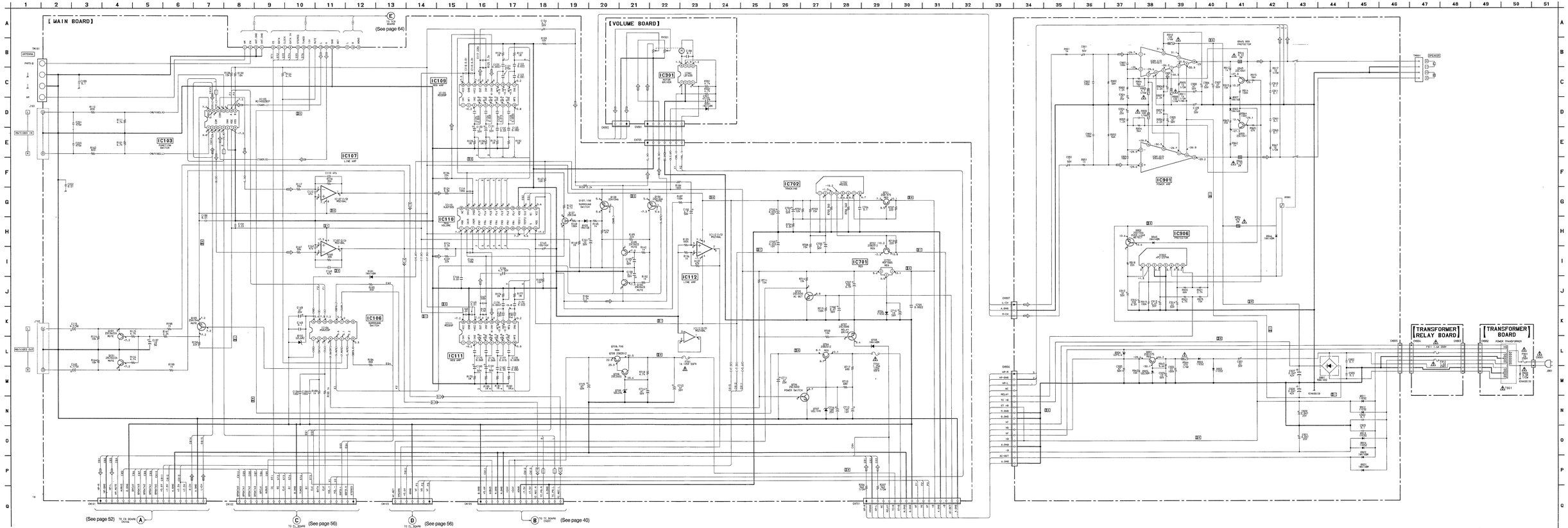
Note:

- : nonflammable resistor.
- : fusible resistor.

Note:	Note:
The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.	Les composants identifiés par une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

- : B+ Line
- : B– Line
- Voltage are dc with respect to ground under no-signal (detuned) conditions. no mark : FM
- Voltages are taken with a VOM (Input Impedance 10MΩ). Voltage variations may be noted due to normal production tolerances.
- Signal path. : FM : REC (DECK B) : CD : PB (DECK B)

4-6. SCHEMATIC DIAGRAM—MAIN Section—



Note:

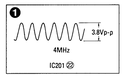
- All capacitors are in μF unless otherwise noted. pF: μμF 50WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and ¼W or less unless otherwise specified.
- : fusible resistor.

Note:	**Note:**
The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.	Les composants identifiés par une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

- : B+ Line
- : B– Line
- : adjustment for repair.

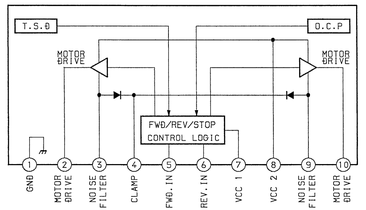
- Voltage and waveforms are dc with respect to ground under no-signal conditions.
  no mark : PLAY BACK
  ( ) : REC
- Voltages are taken with a VOM (Input Impedance 10MΩ). Voltage variations may be noted due to normal production tolerances.
- Waveforms are taken with a oscilloscope. Voltage variations may be noted due to normal production tolerances.
- Circled numbers refer to waveforms.
- Signal path.
  : FM : PB (DECK A)
  : REC (DECK B)
  : PB (DECK B)

● Waveform

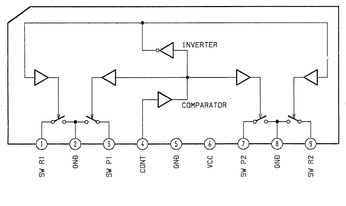


● IC Block Diagrams

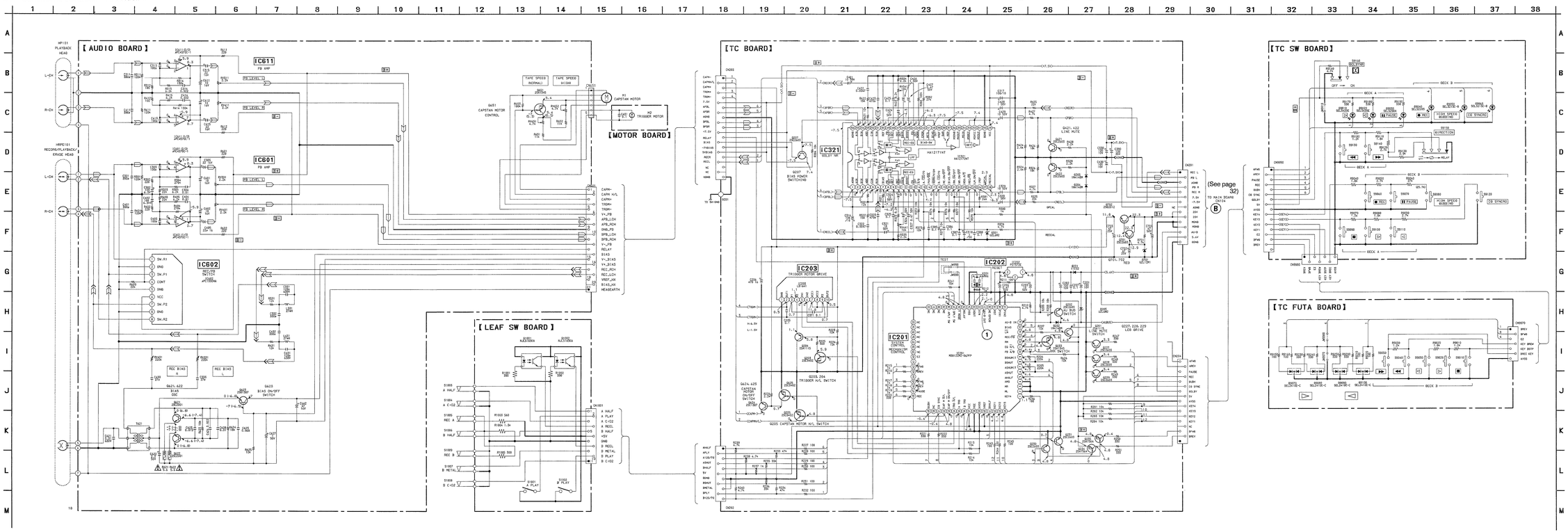
IC203 LB1641



IC602 μPC1330HA

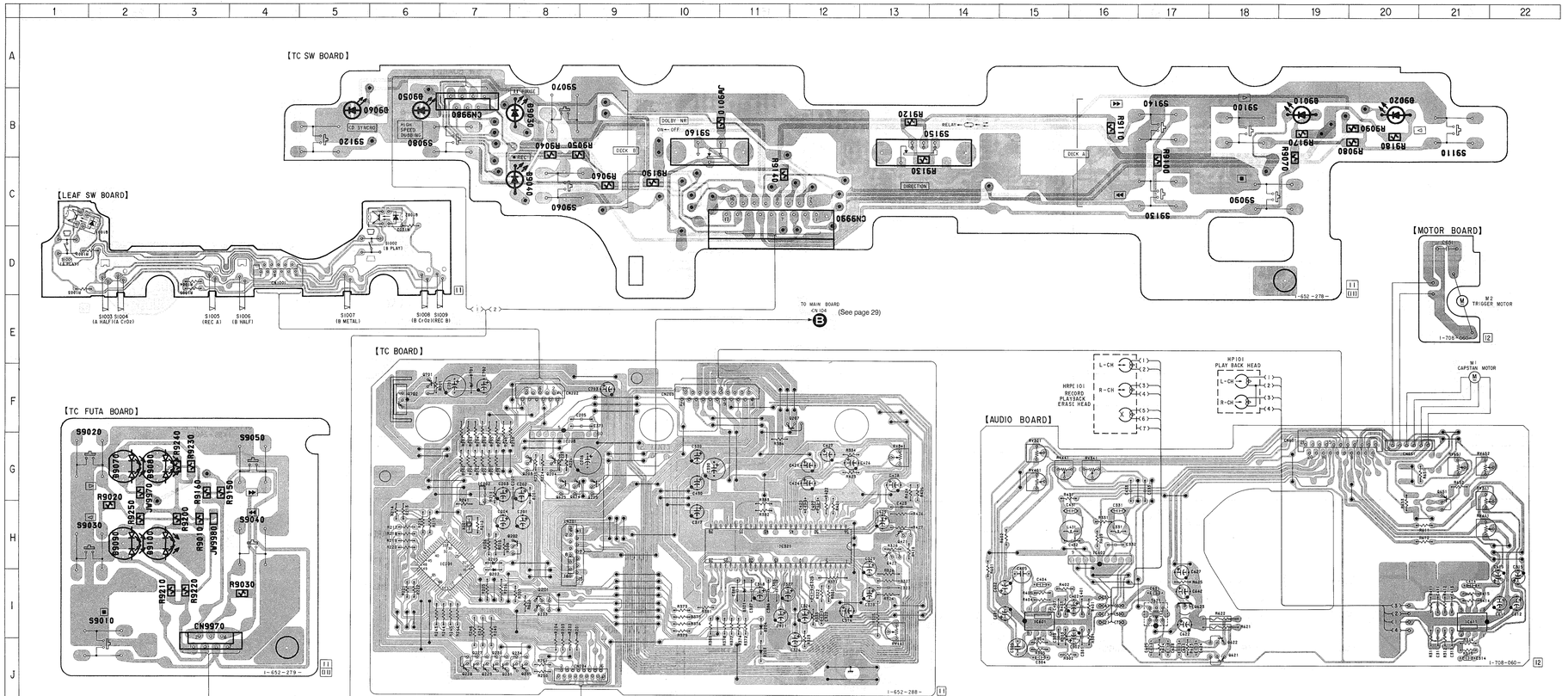


4-7. SCHEMATIC DIAGRAM—TC Section—



4-8. PRINTED WIRING BOARDS—TC Section—

• See page 25 for Circuit Boards Location. • See page 26, 27 for Semiconductor Lead Layouts.



• **Semiconductor Location**

Ref. No.	Location	Ref. No.	Location
D201	G-8	Q202	H-8
D202	H-7	Q203	G-8
D203	J-11	Q204	G-8
D204	I-11	Q205	G-9
D205	H-7	Q207	F-11
D301	I-11	Q227	J-7
D701	F-7	Q228	J-7
D9010	B-19	Q229	J-7
D9020	B-20	Q230	J-7
D9030	B-8	Q231	J-7
D9040	C-8	Q233	I-8
D9050	B-6	Q234	J-8
D9060	B-5	Q235	J-8
D9070	G-2	Q421	H-13
D9080	G-3	Q422	H-13
D9090	H-2	Q621	J-18
D9100	H-3	Q622	I-18
		Q623	I-17
IC201	H-7	Q624	G-8
IC202	G-7	Q625	G-8
IC203	F-8	Q651	H-21
IC321	H-11	Q701	F-6
IC601	I-15	Q702	F-6
IC602	H-16	Q1001	C-2
IC611	I-21	Q1002	C-6
Q201	I-8		

Note:

- ○—— : parts extracted from the component side.
- ● : Through hole.
- ▒▒ : Pattern on the side which is seen.
- ▒▒ : Pattern of the rear side.

4-9. PRINTED WIRING BOARDS—CD Section—

• See page 25 for Circuit Boards Location. • See page 26, 27 for Semiconductor Lead Layouts.

• Semiconductor Location

Ref. No.	Location
D102	D - 14
D103	C - 9
D104	B - 14
D107	D - 14
D300	C - 10
D501	I - 20
D801	B - 3
D802	C - 3
D803	D - 3
D804	E - 3
D805	F - 3
D806	B - 4
D807	C - 4
D808	D - 4
D809	E - 4
D810	F - 4
IC101(A)	D - 17
IC101(B)	B - 22
IC102(A)	C - 14
IC102(B)	B - 23
IC103	B - 15
IC104	D - 9
IC106	C - 11
IC107	D - 10
IC108	B - 10
IC109	B - 12
IC501	F - 19
Q101	B - 13
Q102	E - 15
Q103	E - 14
Q501	D - 19
Q801	G - 5
Q802	G - 5
Q803	B - 4
Q804	D - 4
Q805	E - 4
Q806	G - 3
Q807	G - 4

Note:

- ○——○ : parts extracted from the component side.
- ● : Through hole.
- ▒▒ : Pattern on the side which is seen.
- ▒▒ : Pattern of the rear side.

【CD SW BOARD】

【CD BOARD】

【HP BOARD】

【O/C SW BOARD】

【DISC SENS (B) BOARD】

【TRAY MOTOR BOARD】

【BD BOARD】

【MID SENS BOARD】

【OUT SW BOARD】

【IN SW BOARD】

【COUNT SW BOARD】

【U/D MOTOR BOARD】

【DISC SENS (A) BOARD】

OPTICAL PICK-UP BLOCK (KSS-240A)

TO MAIN BOARD CN101 (See page 29)

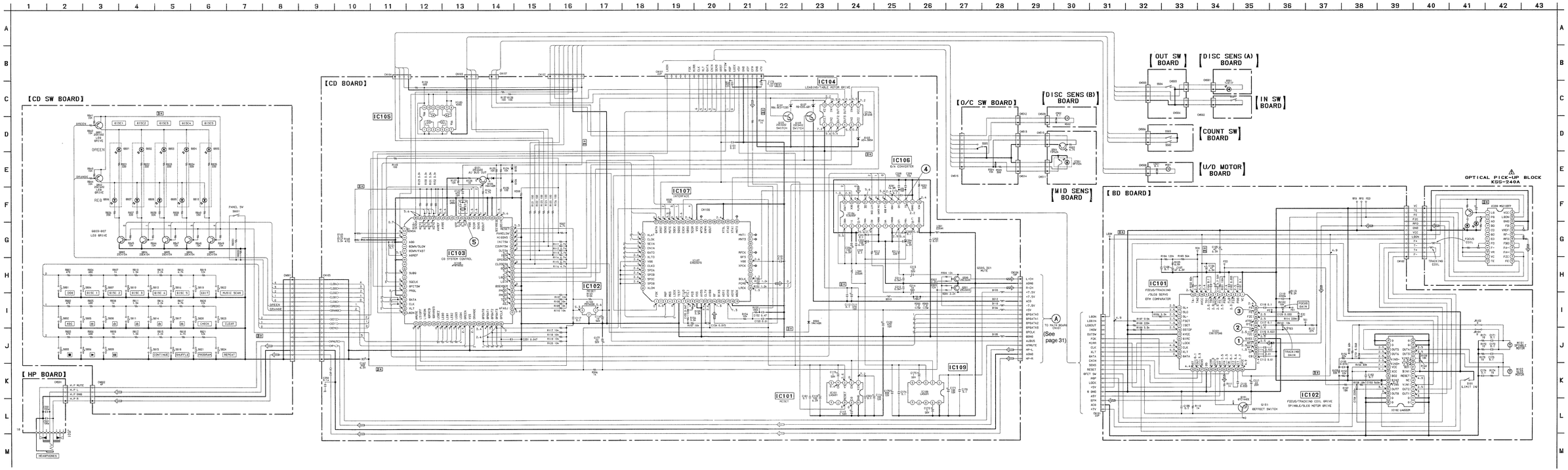
Note:

- All capacitors are in μF unless otherwise noted. pF: μμF 50WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and ¼W or less unless otherwise specified.

Note:	**Note:**
The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.	Les composants identifiés par une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

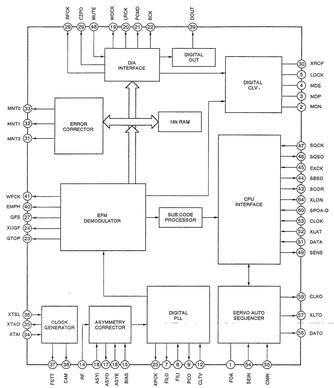
- B+ Line
- B– Line
- : adjustment for repair.
- Voltage and waveforms are dc with respect to ground under no-signal conditions.
  no mark : CD
- Voltages are taken with a VOM (Input impedance 10MΩ). Voltage variations may be noted due to normal production tolerances.
- Waveforms are taken with a oscilloscope. Voltage variations may be noted due to normal production tolerances.
- Circled numbers refer to waveforms.
- Signal path.
  ⇨ : FM ⇨ : CD

4-10. SCHEMATIC DIAGRAM—CD Section— • See page 54, 55 for IC Block Diagrams and Waveforms.

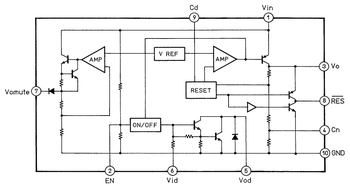


• IC Block Diagrams

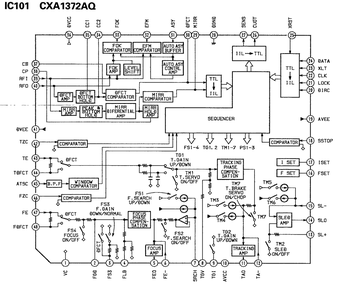
IC107 CXD2517Q



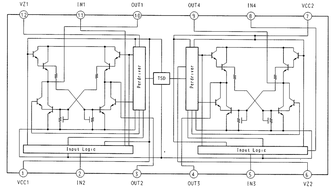
IC101, 109 LA5601



IC101 CXA1372AQ

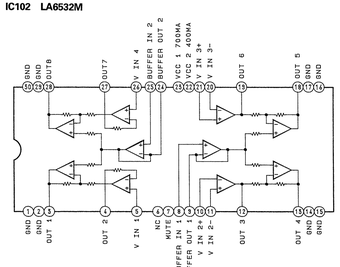


IC104 LB1648

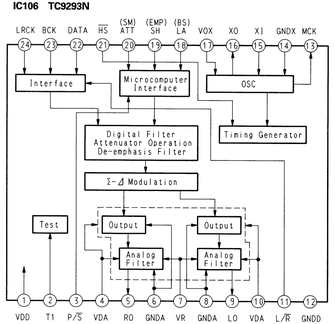


MODE	IN1	IN2	OUT1	OUT2	IN3	IN4	OUT3	OUT4
OPEN	0	0	OPEN	OPEN	0	0	OPEN	OPEN
FORWARD	1	0	H	L	1	0	H	L
REVERSE	0	1	L	H	0	1	L	H
BRAKE	1	1	L	L	1	1	L	L

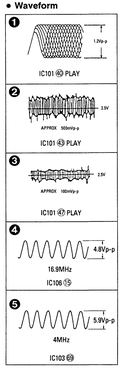
IC102 LA6532M



IC106 TC9293N



• Waveform

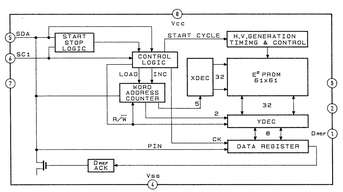


—54—

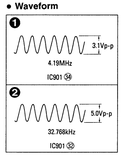
—55—

• IC Block Diagram

IC902 X24C01S



• Waveform

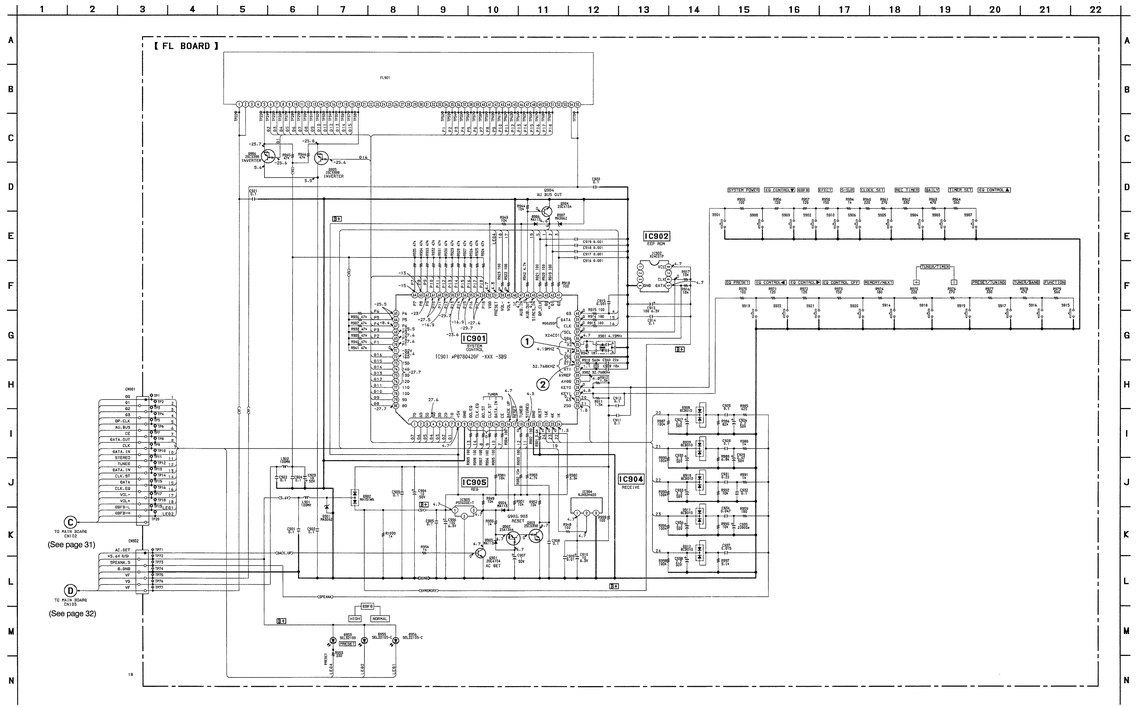


Note:

- All capacitors are in μF unless otherwise noted. pF: μμF
  50WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and ¼W or less unless otherwise specified.
- B+ : B+ Line
- Voltage and waveforms are dc with respect to ground under no-signal (detuned) conditions.
  no mark : FM
- Voltages are taken with a VOM (Input Impedance 10MΩ). Voltage variations may be noted due to normal production tolerances.
- Waveforms are taken with a oscilloscope. Voltage variations may be noted due to normal production tolerances.
- Circled numbers refer to waveforms.

—56—

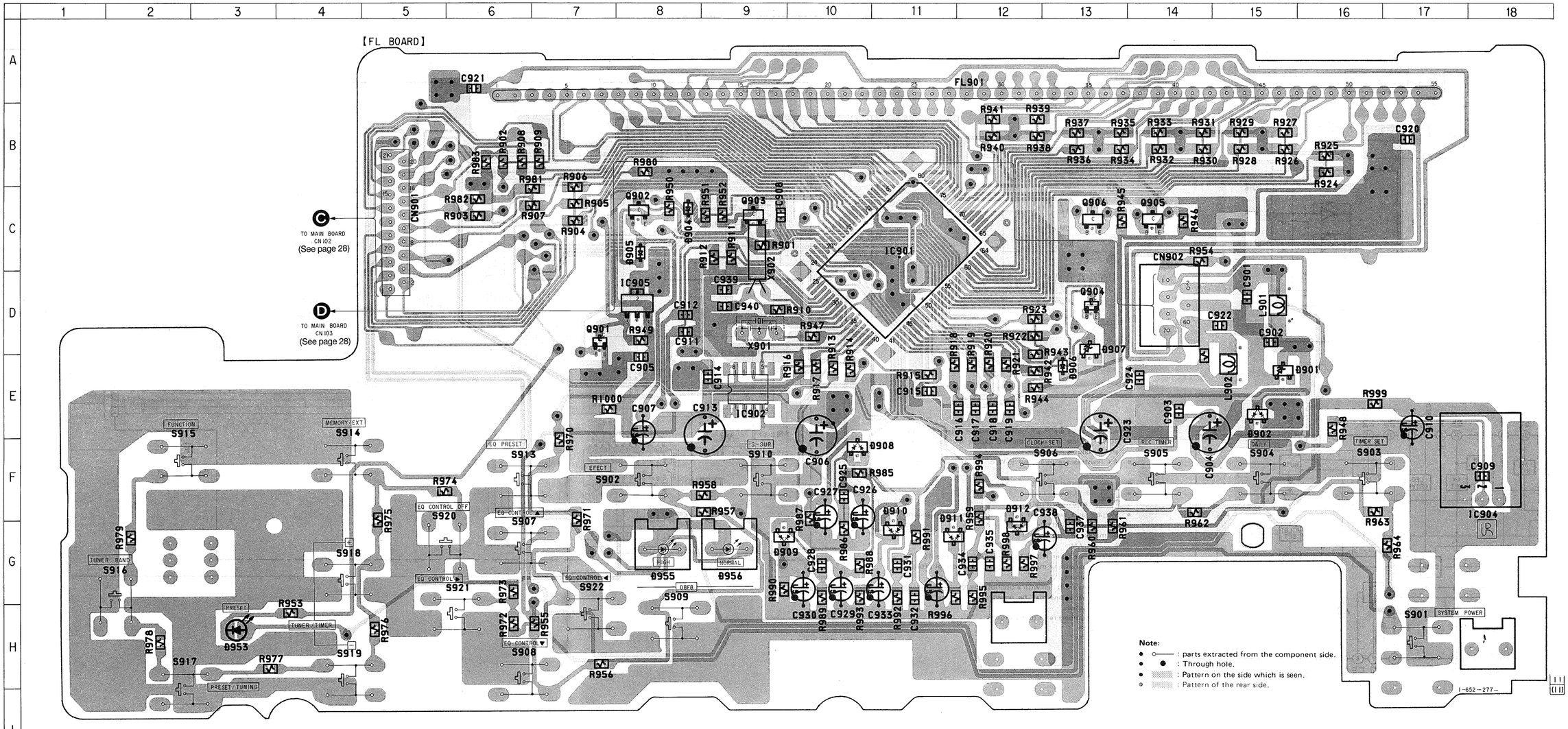
4-11. SCHEMATIC DIAGRAM—PANEL Section—



—57—

—58—

4-12. PRINTED WIRING BOARD—PANEL Section— • See page 25 for Circuit Boards Location. • See page 26, 27 for Semiconductor Lead Layouts.

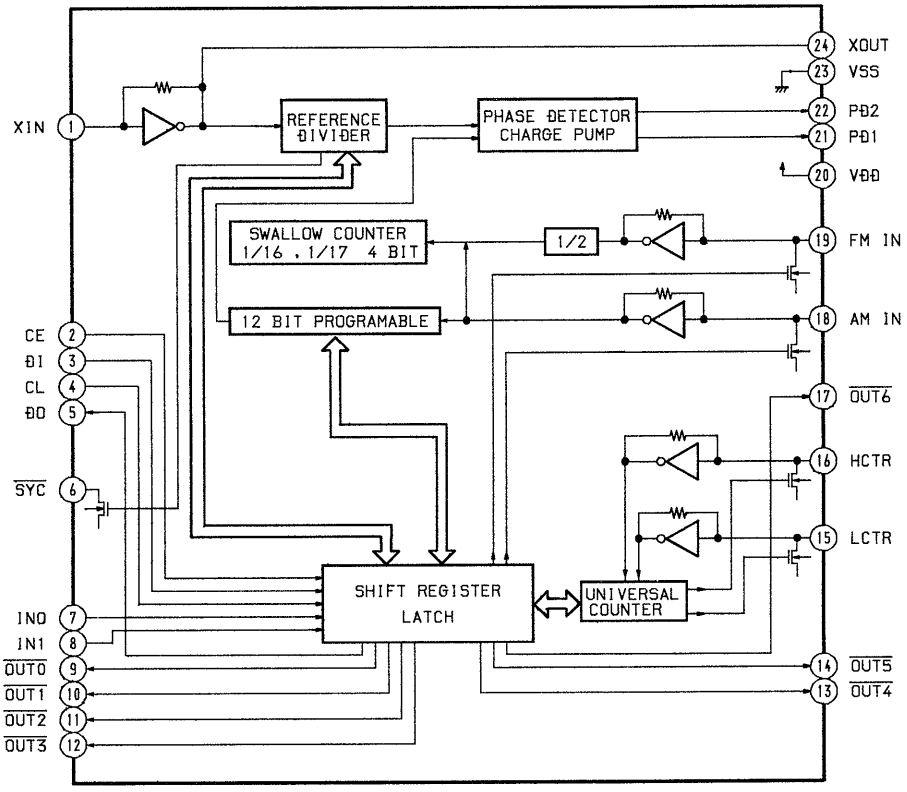


• Semiconductor Location

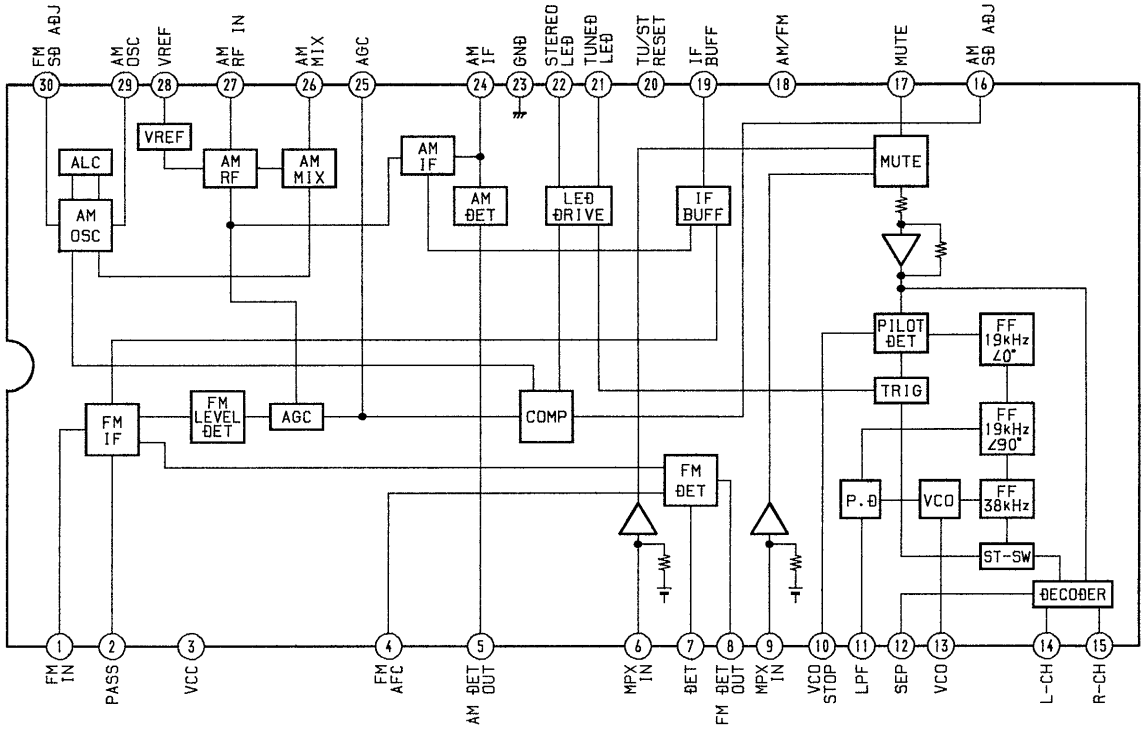
Ref. No.	Location
D901	D-15
D902	E-15
D904	C-8
D905	C-8
D906	E-13
D907	D-13
D908	F-10
D909	G-9
D910	G-11
D911	G-11
D912	G-12
D953	H-3
D955	G-8
D956	G-9
IC901	C-11
IC902	E-9
IC904	E-17
IC905	D-8
Q901	D-7
Q902	C-8
Q903	C-9
Q904	D-13
Q905	C-14
Q906	C-13

● IC Block Diagrams

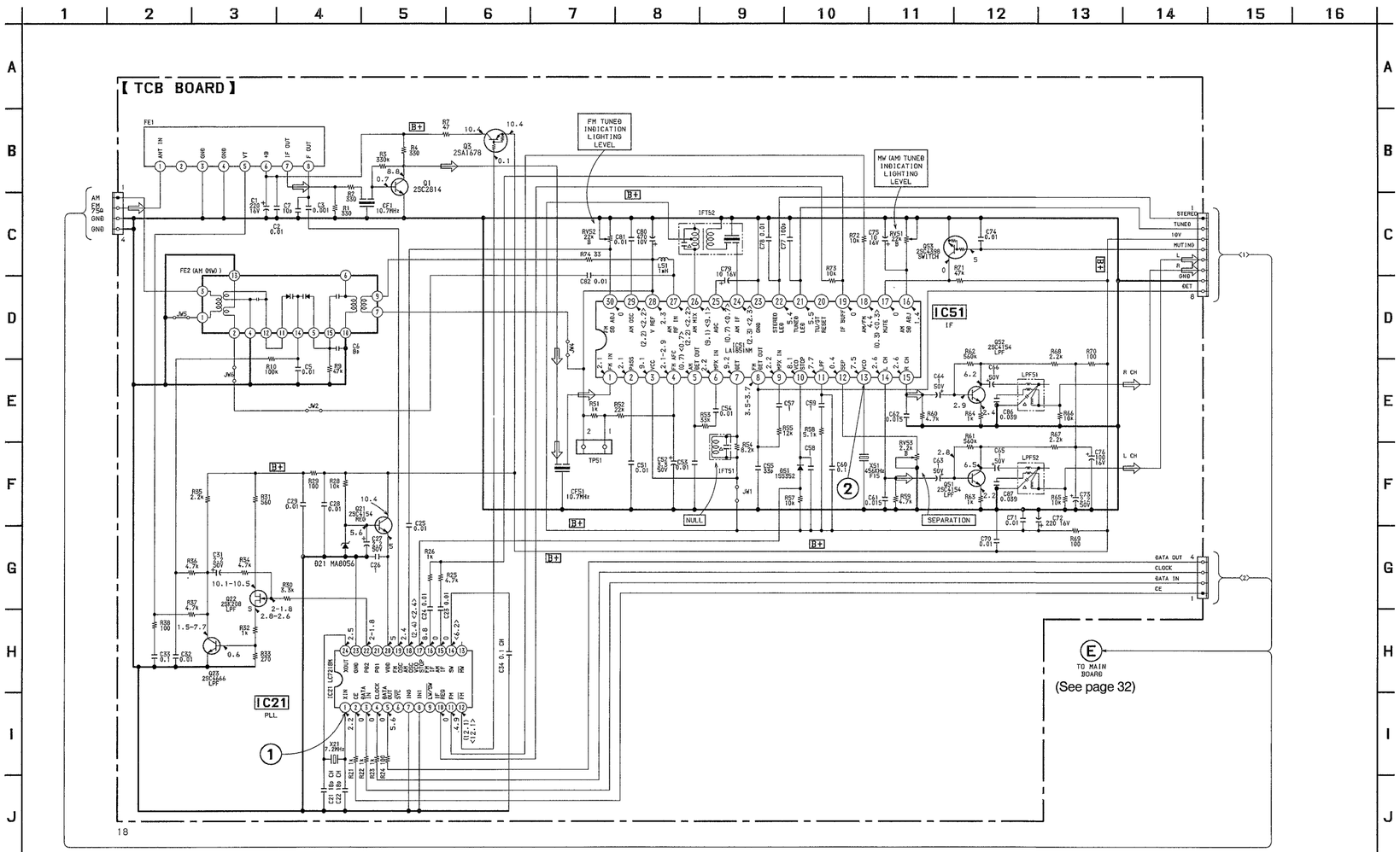
IC21 LC7218M



IC51 LA1851NM



4-13. SCHEMATIC DIAGRAM—TUNER Section—



• **Waveform**

❶
2.0Vp-p
7.2MHz
IC21 ①

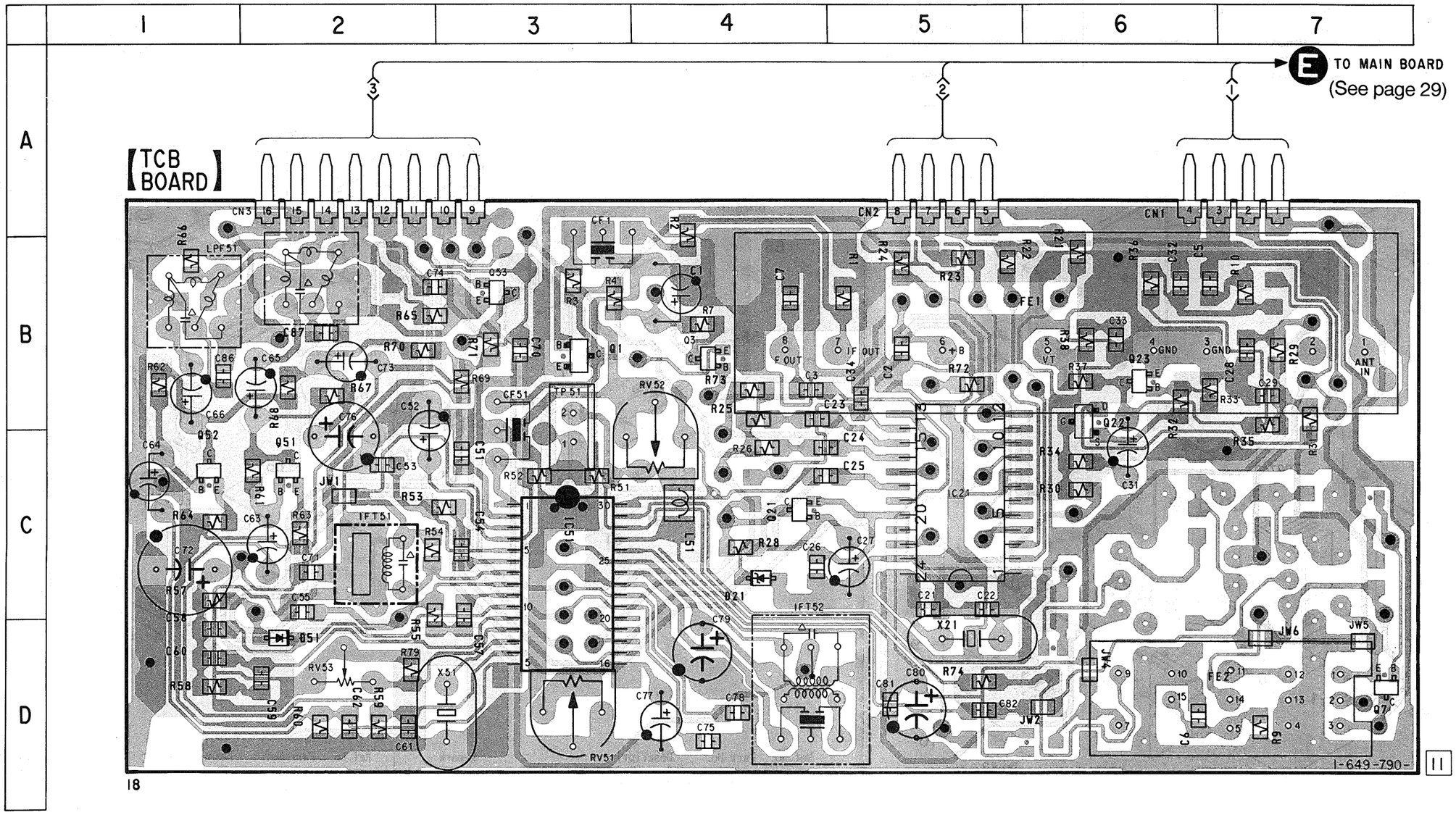
❷
2.0Vp-p
456kHz
IC51 ⑬

Note:

- All capacitors are in μF unless otherwise noted. pF: μμF 50WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and 1/4W or less unless otherwise specified.
- △ : internal component.
- B+ : B+ Line
- ▭ : adjustment for repair.
- Voltage and waveforms are dc with respect to ground under no-signal (detuned) conditions.
  no mark: FM
  ( ): AM
- Voltages are taken with a VOM (Input Impedance 10MΩ). Voltage variations may be noted due to normal production tolerances.
- Waveforms are taken with a oscilloscope. Voltage variations may be noted due to normal production tolerances.
- Circled numbers refer to waveforms.
- Signal path.
  ⇨ : FM

4-14. PRINTED WIRING BOARD—TUNER Section—

• See page 25 for Circuit Boards Location.
• See page 26, 27 for Semiconductor Lead Layouts.



• **Semiconductor Location**

Ref. No.	Location
D21	C-4
D51	D-2
IC21	C-5
IC51	C-3
Q1	B-3
Q3	B-3
Q21	C-4
Q22	B-6
Q23	B-6
Q51	C-2
Q52	C-1
Q53	B-3

Note:

- ○—— : parts extracted from the component side.
- ● : Through hole.
- ▒▒ : Pattern on the side which is seen.
- ▒▒ : Pattern of the rear side.
- △ : internal component

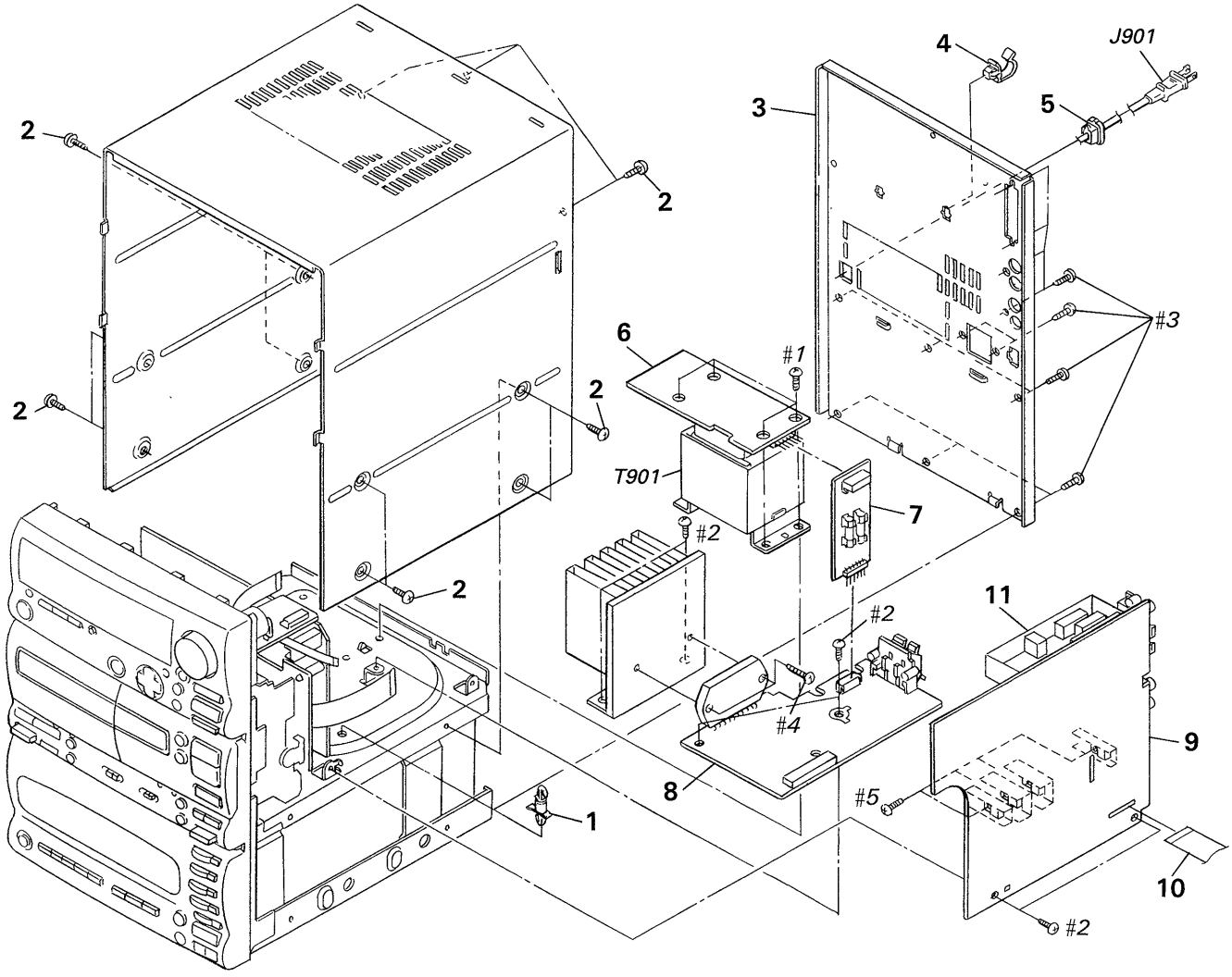
SECTION 5
EXPLODED VIEWS

NOTE:
- –XX, –X mean standardized parts, so they may have some differences from the original one.
- Color Indication of Appearance Parts
  Example:
  KNOB, BALANCE (WHITE)...(RED)
  ↑ ↑
  Parts color Cabinet's color
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- The mechanical parts with no reference number in the exploded views are not supplied.
- Hardware (#mark) list and accessories and packing materials are given in the last of this parts list.

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

Les components identifiés par une marque ⚠ sont critiques pour la sécurité.
Ne les remplacer que par une pièce portant le numéro spécifié.

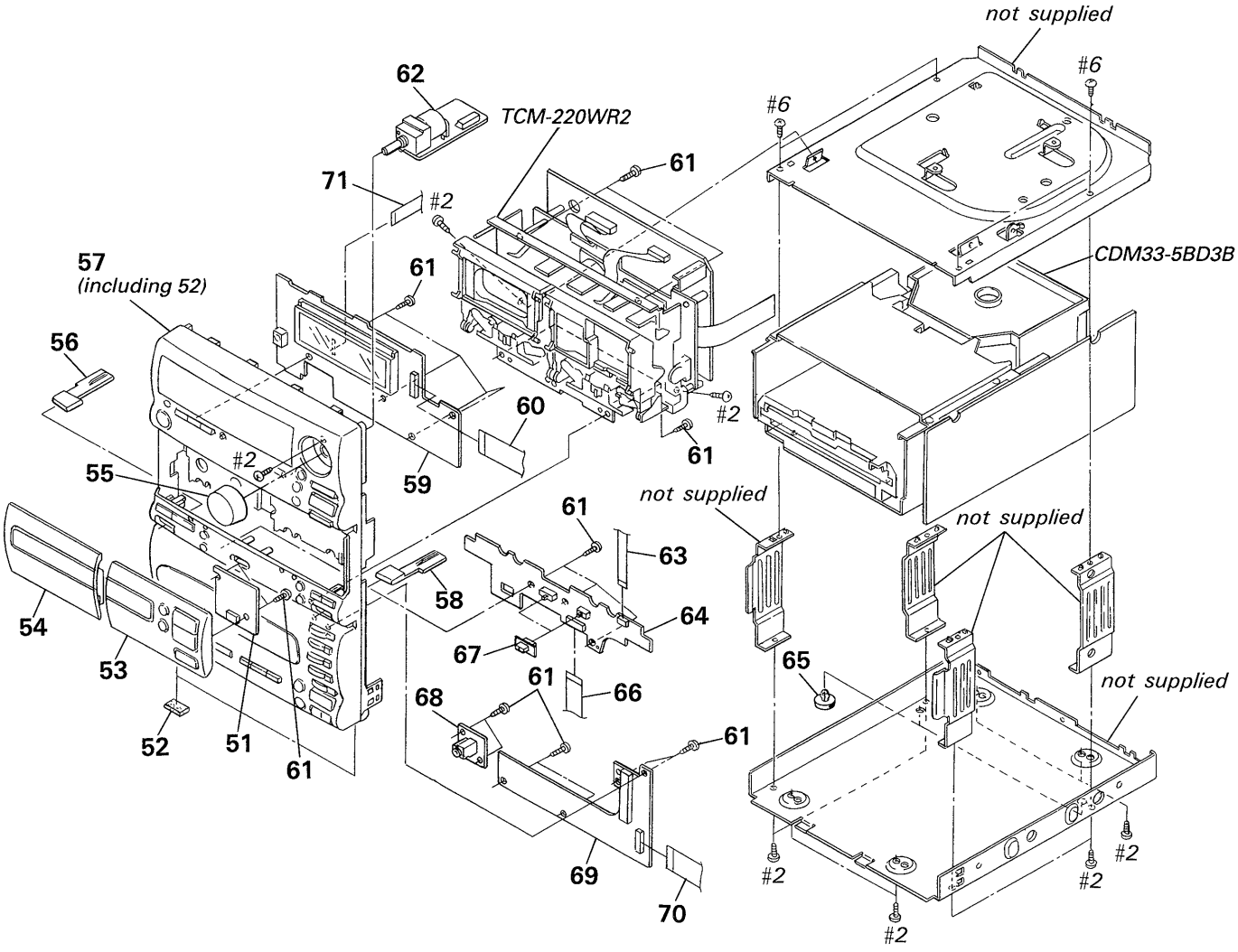
5-1. CABINET SECTION



Ref.No.	Part No.	Description	Remark
*1	3-350-847-21	HOLDER, PCB	
2	3-363-099-01	SCREW (CASE 3 TP2)	
*3	4-965-815-01	PANEL, BACK (US)	
*3	4-967-893-01	PANEL, BACK (Canadian)	
*4	4-949-235-01	HOOK	
*5	3-703-244-00	BUSHING (2104), CORD	
*6	1-652-291-11	TRANSFORMER BOARD	
*7	1-652-294-11	TRANSFORMER RELAY BOARD	

Ref.No.	Part No.	Description	Remark
*8	A-4369-790-A	POWER BOARD, COMPLETE	
*9	A-4369-789-A	MAIN BOARD, COMPLETE	
10	1-765-497-11	WIRE (FLAT TYPE) (19 CORE)	
*11	A-4303-462-A	TCB BOARD, COMPLETE	
⚠J901	1-690-609-21	CORD, POWER	
⚠T901	1-426-831-11	TRANSFORMER, POWER (US)	
⚠T901	1-426-832-11	TRANSFORMER, POWER (Canadian)	

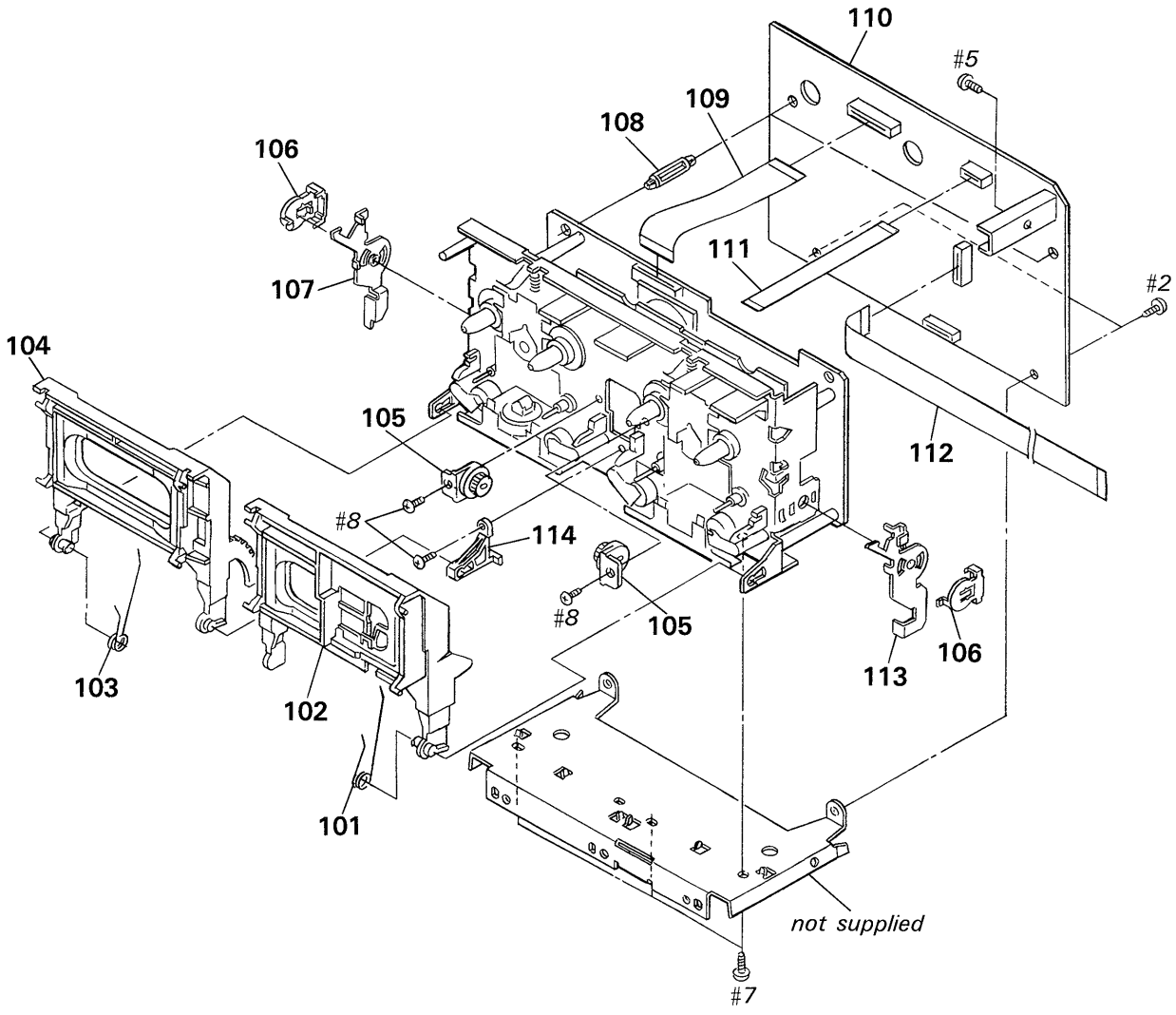
5-2. CHASSIS SECTION



Ref.No.	Part No.	Description	Remark
*51	1-652-279-11	TC FUTA BOARD	
52	4-930-336-61	FOOT (FELT)	
53	X-4944-809-1	LID (B) ASSY, CASSETTE	
54	X-4944-808-1	LID (A) ASSY, CASSETTE	
55	4-963-285-01	KNOB (V)	
56	4-965-856-01	BUTTON (E-A)	
57	X-4944-807-1	PANEL ASSY, FRONT	
58	4-965-857-01	BUTTON (E-B)	
*59	A-4369-794-A	FL BOARD, COMPLETE	
60	1-765-498-11	WIRE (FLAT TYPE) (21 CORE)	
61	4-951-620-01	SCREW (2.6X8), +BVTP	

Ref.No.	Part No.	Description	Remark
*62	1-652-292-11	VOLUME BOARD	
63	1-765-495-11	WIRE (FLAT TYPE) (7 CORE)	
*64	A-4369-795-A	TC SW BOARD, COMPLETE	
65	4-965-822-01	FOOT	
66	1-765-496-11	WIRE (FLAT TYPE) (17 CORE)	
67	4-965-855-01	KNOB (SL)	
*68	1-652-281-11	HP BOARD	
*69	A-4369-797-A	CD SW BOARD, COMPLETE	
70	1-765-503-11	WIRE (FLAT TYPE) (19 CORE)	
71	1-765-500-11	WIRE (FLAT TYPE) (7 CORE)	

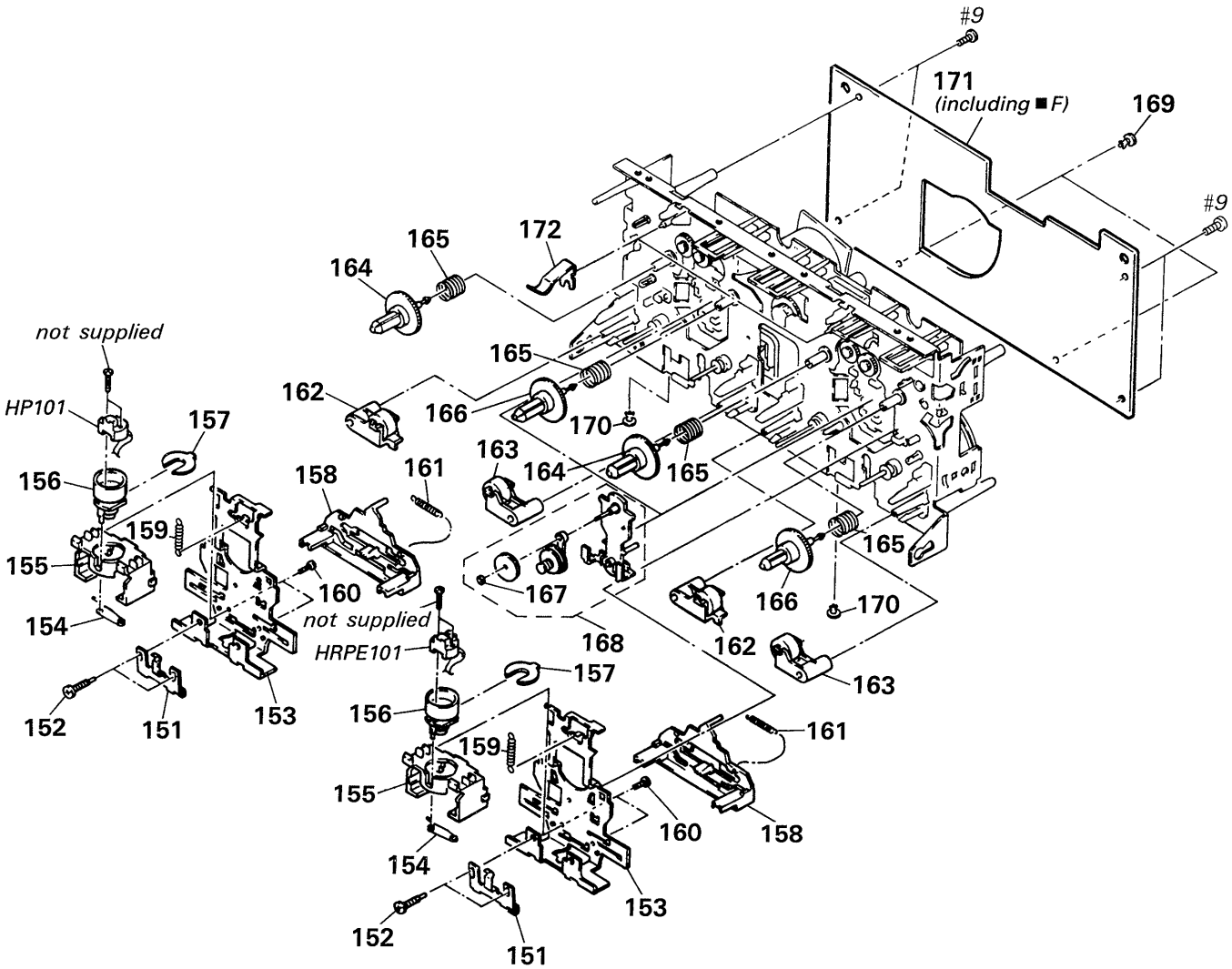
5-3. MECHANISM SECTION-1
(TCM-220WR2)



Ref.No.	Part No.	Description	Remark
101	4-959-232-01	SPRING (R), TORSION	
102	X-4944-995-1	HOLDER (R) ASSY, CASSETTE	
103	4-959-231-01	SPRING (L), TORSION	
104	X-4944-994-1	HOLDER (L) ASSY, CASSETTE	
105	3-354-963-01	DAMPER	
106	3-354-957-01	JOINT (LOCK LEVER)	
*107	3-367-709-01	LEVER (LOCK LEVER L)	

Ref.No.	Part No.	Description	Remark
*108	3-682-419-21	HOLDER, P.C.B	
109	1-751-820-11	WIRE (FLAT TYPE) (21 CORE)	
*110	A-4357-889-A	TC BOARD, COMPLETE	
111	1-765-501-11	WIRE (FLAT TYPE) (11 CORE)	
112	1-765-502-11	WIRE (FLAT TYPE) (15 CORE)	
113	4-965-877-01	LEVER (LOCK LEVER R)	
*114	3-908-611-01	FULCRUM, HOLDER	

5-4. MECHANISM SECTION-2
(TCM-220WR2)



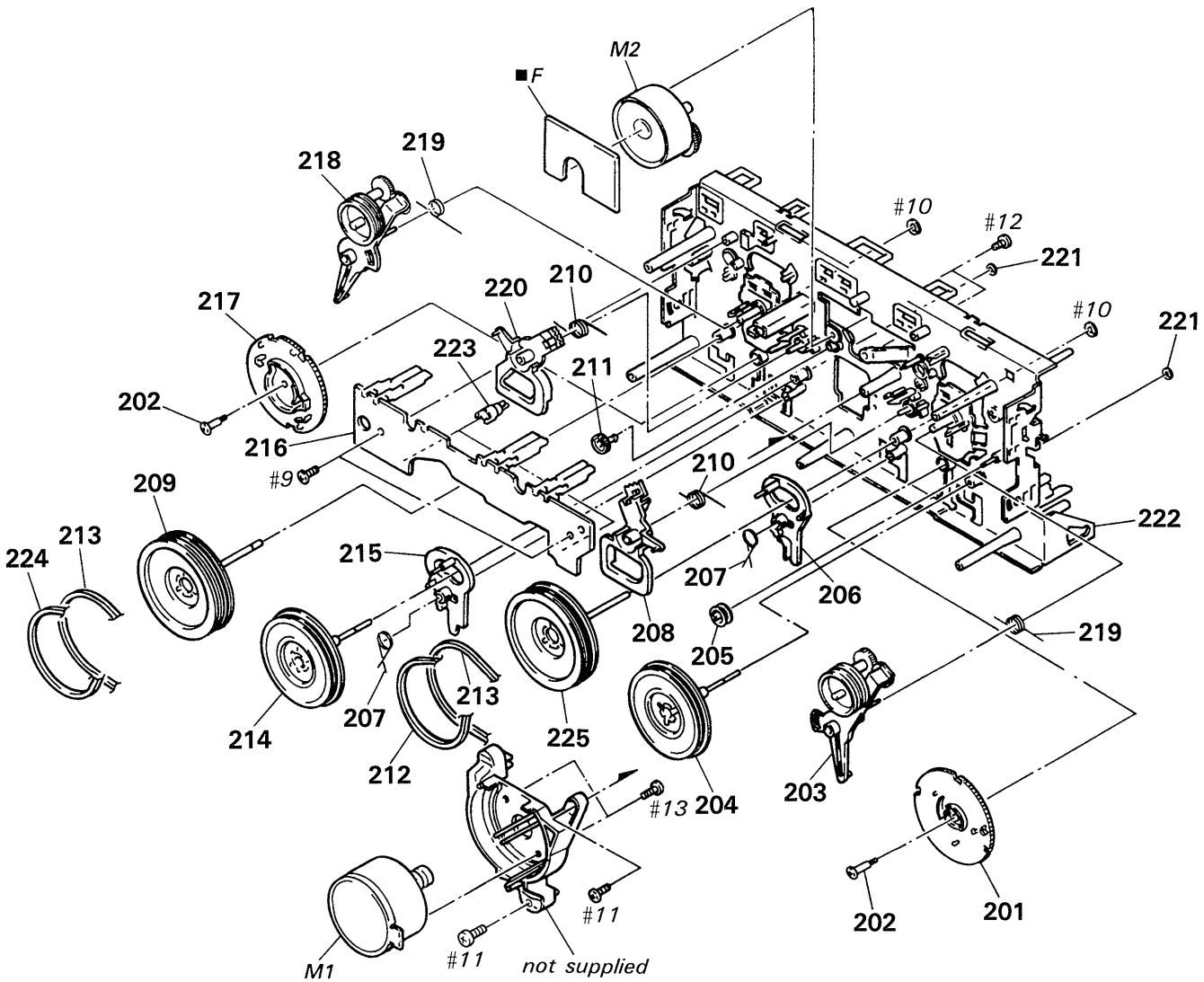
Ref.No.	Part No.	Description	Remark
151	3-908-560-01	SPRING, AZIMUTH ADJUSTMENT	
152	3-908-561-01	SCREW	
*153	X-3367-584-2	SLIDER (HEAD) ASSY	
154	3-908-556-01	SPRING, HEAD TOGGLE	
155	3-908-558-02	FITTING BLOCK, HEAD	
156	3-908-557-02	ROTARY BLOCK, HEAD	
*157	3-908-559-01	STOPPER, AZIMUTH	
158	3-908-555-01	SLIDER (REV SLIDER)	
159	3-908-602-01	SPRING (HEAD), TENSION	
160	3-388-848-01	SCREW (P2X6) (B TIGHT)	
161	3-911-113-01	SPRING, TENSION	
162	X-3367-589-1	PINCH LEVER (REV) ASSY	

Ref.No.	Part No.	Description	Remark
163	X-3367-588-1	PINCH LEVER (FWD) ASSY	
164	3-908-613-01	GEAR (S), REEL	
165	3-908-596-01	SPRING (REEL), COMPRESSION	
166	X-3367-594-1	REEL (T) ASSY	
167	3-669-465-00	WASHER (1.5), STOPPER	
168	X-3367-592-2	TU ASSY	
169	3-911-116-01	RIVET, PUSH	
170	3-911-116-11	RIVET, PUSH	
*171	A-2007-131-A	AUDIO BOARD, COMPLETE	
172	3-915-490-01	DETENT, HALF	
HP101	1-500-093-11	HEAD, MAGNETIC (PLAYBACK) (DECK-A)	
HRPE101	1-500-094-11	HEAD, MAGNETIC (REC/PB/ERASE) (DECK-B)	

5-5. MECHANISM SECTION-3

(TCM-220WR2)

■F : MOTOR BOARD

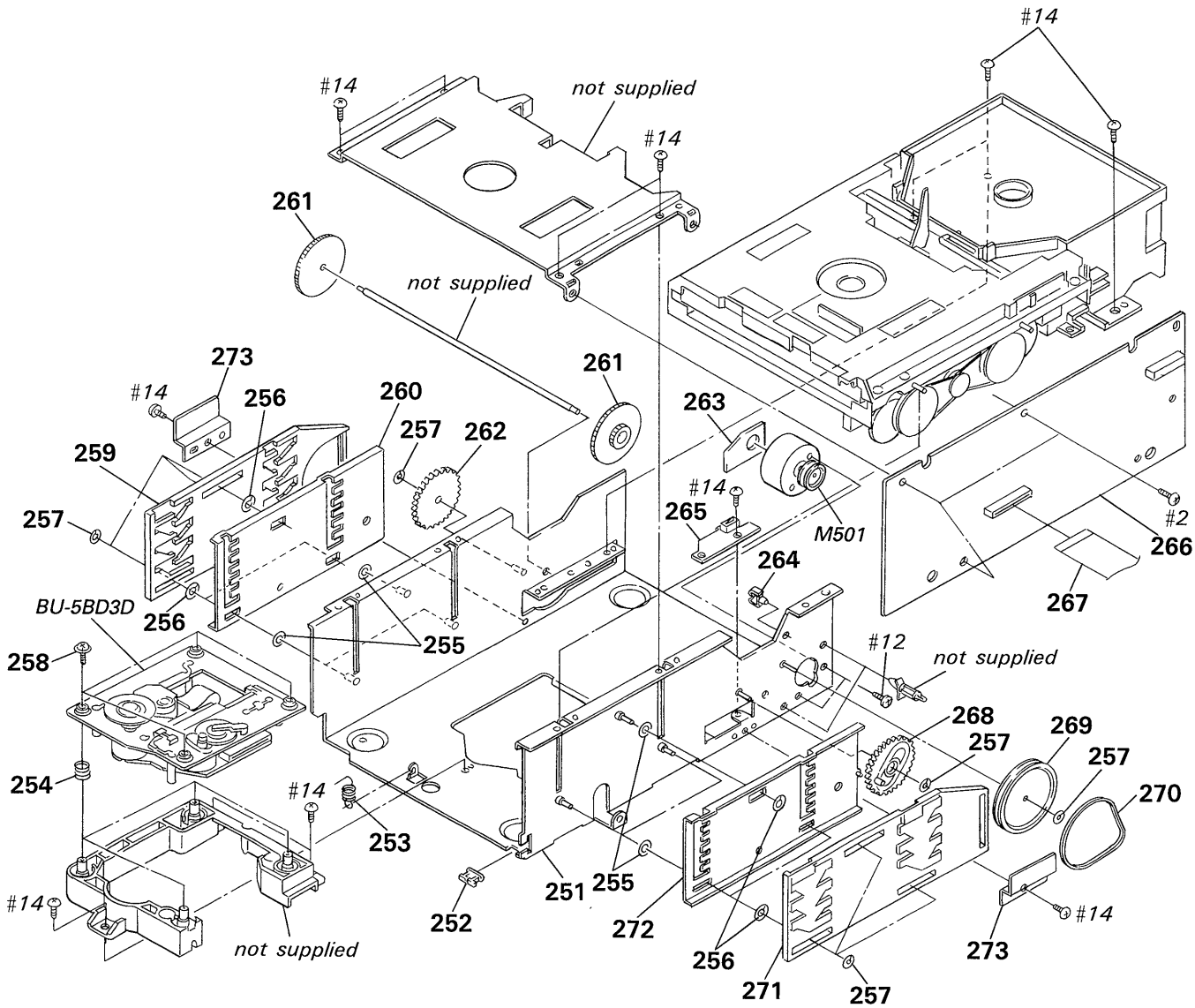


Ref.No.	Part No.	Description	Remark
201	3-908-597-01	CAM (A)	
202	3-908-608-01	SCREW, STEP	
203	X-3367-590-2	ARM (A) ASSY, FR	
204	X-3367-586-1	FLYWHEEL (AR) ASSY	
205	3-908-610-01	PULLEY, TENSION	
206	3-908-599-01	LEVER (REV-A)	
207	3-908-601-01	SPRING (REV LEVER), TORSION	
208	3-908-603-01	LEVER (TRIGGER A)	
209	X-3367-593-1	FLYWHEEL (BF) ASSY	
210	3-908-605-01	SPRING (TRIGGER), TORSION	
211	3-908-609-01	GEAR, TRIGGER	
212	3-913-845-01	BELT (A)	
213	3-913-846-01	BELT (FR)	
214	X-3367-595-1	FLYWHEEL (BR) ASSY	

Ref.No.	Part No.	Description	Remark
215	3-908-600-01	LEVER (REV-B)	
*216	1-650-669-11	LEAF SW BOARD	
217	3-908-598-01	CAM (B)	
218	X-3367-591-2	ARM (B) ASSY, FR	
219	3-911-114-01	SPRING (FR), TORSION	
220	3-908-604-01	LEVER (TRIGGER B)	
221	3-911-115-01	WASHER, STOPPER	
222	X-3367-587-1	CHASSIS ASSY, MECHANICAL	
*223	3-381-776-01	HOLDER (LED)	
224	3-917-176-01	BELT (B)	
225	X-3368-837-1	FLYWHEEL (AF) ASSY	
M1	X-3369-110-1	MOTOR ASSY (CAPSTAN)	
M2	X-3369-111-1	MOTOR ASSY (TRRIGER)	

5-6. CD MECHANISM SECTION-1

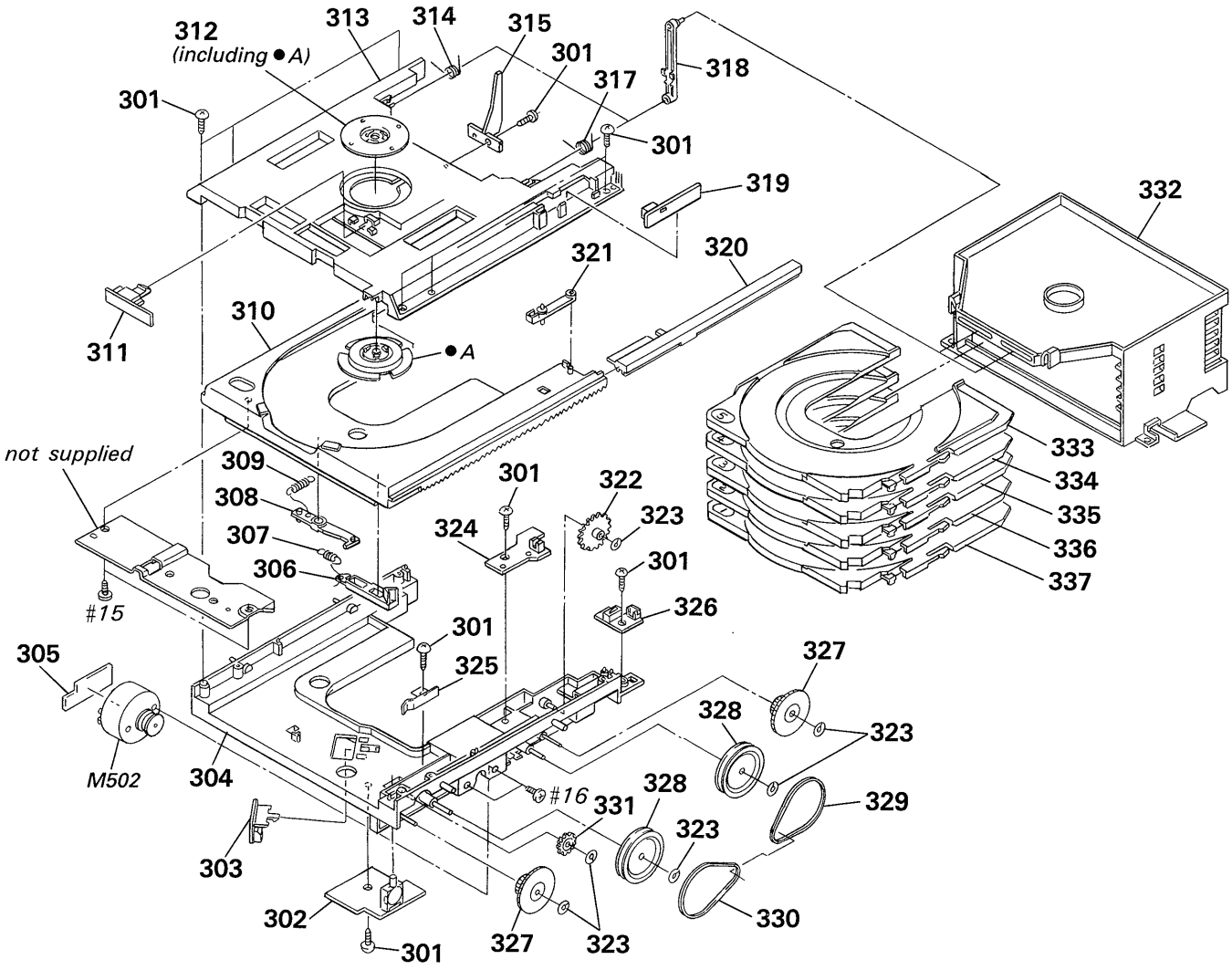
(CDM33-5BD3B)



Ref.No.	Part No.	Description	Remark
*251	X-4944-558-1	CHASSIS ASSY, SUB	
252	3-383-699-01	CLAMP (EDGE)	
253	4-967-138-01	SPRING (BIAS), TENSION	
254	4-959-996-01	SPRING (932), COMPRESSION	
255	4-965-882-01	SPACER	
256	4-967-102-01	WASHER, STOPPER	
257	4-957-798-01	WASHER, STOPPER	
258	4-933-134-01	SCREW (+PTPWH M2.6X6)	
259	4-964-470-01	CAM (L), PLATE	
*260	X-4944-555-1	SLIDER ASSY (L)	
261	4-964-466-01	GEAR (JOINT)	
262	4-964-468-01	GEAR (CAM L)	

Ref.No.	Part No.	Description	Remark
*263	1-651-396-11	U/D MOTOR BOARD	
264	4-962-113-01	CLAMP	
*265	1-651-397-11	COUNT SW BOARD	
*266	A-4369-799-A	CD BOARD, COMPLETE	
267	1-765-499-11	WIRE (FLAT TYPE) (22 CORE)	
268	4-964-467-01	GEAR (CAM R)	
269	4-964-487-01	PULLEY (U/D)	
270	4-964-477-01	BELT (U/D)	
271	4-964-469-01	CAM (R), PLATE	
*272	X-4944-554-1	SLIDER ASSY (R)	
*273	4-967-875-01	REINFORCEMENT (PLATE CAM)	
M501	A-4660-642-A	MOTOR (U/D) ASSY	

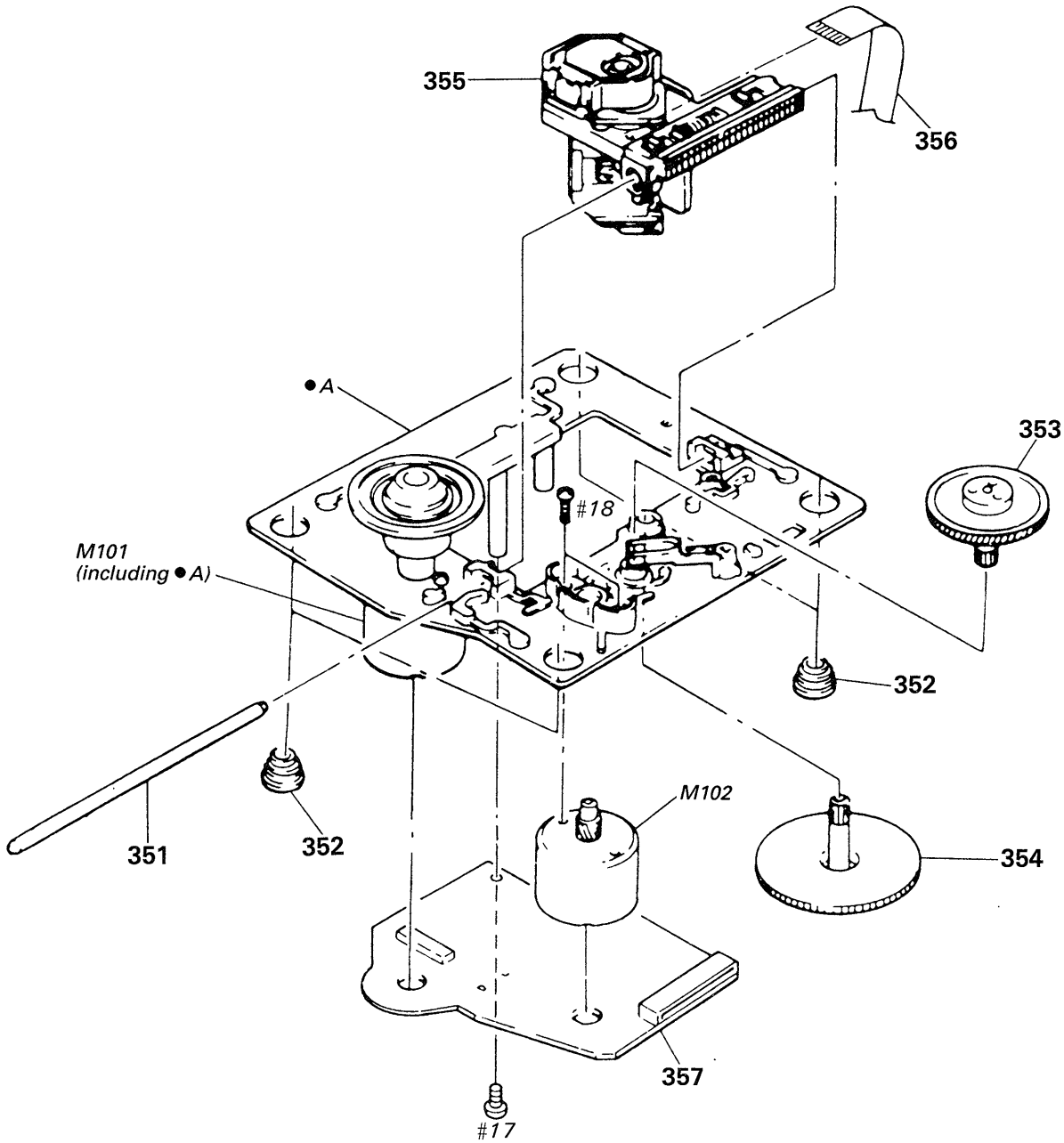
5-7. CD MECHANISM SECTION-2
(CDM33-5BD3B)



Ref.No.	Part No.	Description	Remark
301	4-951-620-01	SCREW (2.6X8), +BVTP	
*302	1-651-394-11	O/C SW BOARD	
*303	1-651-399-11	DISC SENS (B) BOARD	
304	X-4944-557-1	BASE (TRAY) ASSY, FITTING	
*305	1-651-391-11	TRAY MOTOR BOARD	
306	4-964-458-01	SLIDER (CLICK)	
307	4-964-481-01	SPRING (A), TENSION	
308	4-964-459-01	LEVER (STOPPER)	
309	4-964-482-01	SPRING (B), TENSION	
310	4-964-453-01	TRAY (MAIN)	
*311	1-651-398-11	DISC SENS (A) BOARD	
312	1-452-719-11	MAGNET ASSY	
313	4-964-492-01	BASE (MAGNET), FITTING	
314	4-964-485-01	SPRING (LEVER L), TORSION	
*315	4-965-895-01	STOPPER	
317	4-964-484-01	SPRING (LEVER R), TORSION	
*318	4-964-460-01	LEVER (STOCK)	
*319	1-651-392-11	MID SW BOARD	
320	4-964-455-01	SLIDER (SELECTION)	

Ref.No.	Part No.	Description	Remark
321	X-4944-659-1	LEVER (GOOSENECK) ASSY	
322	4-964-463-01	GEAR (TRAY R)	
323	4-957-798-01	WASHER, STOPPER	
*324	1-651-393-11	INTERRUPTER BOARD	
325	4-967-196-01	SPRING (CLICK), LEAF	
*326	1-651-395-11	IN SW BOARD	
327	4-964-464-01	GEAR (DECELERATION)	
328	4-964-465-01	PULLEY (TRAY)	
329	4-964-476-01	BELT (R)	
330	4-964-475-01	BELT (F)	
331	4-964-462-01	GEAR (TRAY F)	
332	4-964-193-01	STOCKER	
333	X-4944-827-1	TRAY (SUB NO.5) ASSY	
334	X-4944-826-1	TRAY (SUB NO.4) ASSY	
335	X-4944-825-1	TRAY (SUB NO.3) ASSY	
336	X-4944-824-1	TRAY (SUB NO.2) ASSY	
337	X-4944-823-1	TRAY (SUB NO.1) ASSY	
M502	X-4944-463-1	MOTOR ASSY (TRAY)	

5-8. OPTICAL PICK-UP SECTION
(BU-5BD3B)



The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.	Les components identifiés par une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

Ref.No.	Part No.	Description	Remark
351	4-917-565-01	SHAFT, SLED	
352	4-951-940-01	INSULATOR (BU)	
353	4-917-567-01	GEAR (M)	
354	4-917-564-01	GEAR (P), FLATNESS	
⚠355	8-848-144-11	DEVICE, OPTICAL KSS-240A	
356	1-575-001-11	WIRE, FLAT TYPE (12 CORE)	
*357	A-4617-371-A	BD BOARD, COMPLETE	
M101	X-4917-523-3	MOTOR ASSY, DISC (SPINDLE)	
M102	X-4917-504-1	MOTOR ASSY (SLED)	

SECTION 6
ELECTRICAL PARTS LIST

AUDIO **MOTOR**

NOTE:

- Due to standardization, replacements in the parts list may be different from the parts specified in the diagrams or the components used on the set.
- –XX and –X mean standardized parts, so they may have some difference from the original one.
- RESISTORS
  All resistors are in ohms.
  METAL: Metal-film resistor.
  METAL OXIDE: Metal oxide-film resistor.
  F: nonflammable
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- SEMICONDUCTORS
  In each case, u : μ, for example:
  uA··· : μA···, uPA··· : μPA···, uPB··· : μPB···, uPC··· : μPC···, uPD··· : μPD···
- CAPACITORS
  uF : μF
- COILS
  uH : μH

When indicating parts by reference number, please include the board.

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

Les components identifiés par une marque ⚠ sont critiques pour la sécurité.
Ne les remplacer que par une pièce portant le numéro spécifié.

Ref.No.	Part No.	Description			Remark
*	A-2007-131-A	AUDIO BOARD, COMPLETE			
		**********			
		MOTOR BOARD			
		**********			
		< CAPACITOR >			
C301	1-162-289-31	CERAMIC	390PF	10%	50V
C302	1-124-443-00	ELECT	100uF	20%	10V
C303	1-162-282-31	CERAMIC	100PF	10%	50V
C304	1-130-483-00	MYLAR	0.01uF	5%	50V
C305	1-124-282-00	ELECT	22uF	20%	16V
C311	1-162-289-31	CERAMIC	390PF	10%	50V
C313	1-162-282-31	CERAMIC	100PF	10%	50V
C314	1-130-487-00	MYLAR	0.022uF	5%	50V
C315	1-124-234-00	ELECT	22uF	20%	16V
C331	1-136-434-11	FILM	120PF	5%	630V
C332	1-162-288-31	CERAMIC	330PF	10%	50V
C333	1-162-209-31	CERAMIC	27PF	5%	50V
C401	1-162-289-31	CERAMIC	390PF	10%	50V
C402	1-124-443-00	ELECT	100uF	20%	10V
C403	1-162-282-31	CERAMIC	100PF	10%	50V
C404	1-130-483-00	MYLAR	0.01uF	5%	50V
C405	1-124-282-00	ELECT	22uF	20%	16V
C411	1-162-289-31	CERAMIC	390PF	10%	50V
C413	1-162-282-31	CERAMIC	100PF	10%	50V
C414	1-130-487-00	MYLAR	0.022uF	5%	50V
C415	1-124-234-00	ELECT	22uF	20%	16V
C431	1-136-434-11	FILM	120PF	5%	630V
C432	1-162-288-31	CERAMIC	330PF	10%	50V
C433	1-162-209-31	CERAMIC	27PF	5%	50V
C601	1-126-157-11	ELECT	10uF	20%	16V
C602	1-126-157-11	ELECT	10uF	20%	16V
C611	1-126-157-11	ELECT	10uF	20%	16V
C612	1-126-157-11	ELECT	10uF	20%	16V
C621	1-136-601-11	FILM	0.01uF	5%	630V
C622	1-124-925-11	ELECT	2.2uF	20%	100V
C623	1-136-155-00	FILM	0.015uF	5%	50V
C624	1-130-481-00	MYLAR	0.0068uF	5%	50V
C625	1-130-481-00	MYLAR	0.0068uF	5%	50V
C627	1-124-903-11	ELECT	1uF	20%	50V
C628	1-136-153-00	FILM	0.01uF	5%	50V
C642	1-124-477-11	ELECT	47uF	20%	25V
C651	1-164-159-11	CERAMIC	0.1uF		50V
		< CONNECTOR >			
*CN601	1-568-864-11	SOCKET, CONNECTOR 21P			
*CN602	1-564-718-11	PIN, CONNECTOR (SMALL TYPE) 2P			
*CN651	1-564-521-11	PLUG, CONNECTOR 6P			
		< IC >			
IC601	8-759-111-44	IC UPC4570C-1			
IC602	8-759-143-54	IC UPC1330HA			
IC611	8-759-111-44	IC UPC4570C-1			
		< COIL >			
L331	1-410-780-11	INDUCTOR	27mH		
L431	1-410-780-11	INDUCTOR	27mH		
		< TRANSISTOR >			
Q621	8-729-142-46	TRANSISTOR	2SC2001-LK		
Q622	8-729-142-46	TRANSISTOR	2SC2001-LK		
Q623	8-729-801-93	TRANSISTOR	2SD1387-3		
Q651	8-729-900-65	TRANSISTOR	DTA144ES		
		< RESISTOR >			
R301	1-247-881-00	CARBON	120K	5%	1/4W
R302	1-249-409-11	CARBON	220	5%	1/4W
R303	1-249-433-11	CARBON	22K	5%	1/4W
R304	1-247-889-00	CARBON	270K	5%	1/4W
R305	1-247-858-11	CARBON	13K	5%	1/4W
R311	1-247-881-00	CARBON	120K	5%	1/4W
R312	1-247-807-31	CARBON	100	5%	1/4W
R314	1-247-882-11	CARBON	130K	5%	1/4W
R315	1-247-850-11	CARBON	6.2K	5%	1/4W
R331	1-249-430-11	CARBON	12K	5%	1/4W
R401	1-247-881-00	CARBON	120K	5%	1/4W
R402	1-249-409-11	CARBON	220	5%	1/4W
R403	1-249-433-11	CARBON	22K	5%	1/4W
R404	1-247-889-00	CARBON	270K	5%	1/4W
R405	1-247-858-11	CARBON	13K	5%	1/4W

AUDIO MOTOR BD

Ref.No.	Part No.	Description			Remark
R411	1-247-881-00	CARBON	120K	5%	1/4W
R412	1-247-807-31	CARBON	100	5%	1/4W
R414	1-247-882-11	CARBON	130K	5%	1/4W
R415	1-247-850-11	CARBON	6.2K	5%	1/4W
R431	1-249-430-11	CARBON	12K	5%	1/4W
R601	1-249-409-11	CARBON	220	5%	1/4W
R602	1-249-409-11	CARBON	220	5%	1/4W
R609	1-249-433-11	CARBON	22K	5%	1/4W
R611	1-249-409-11	CARBON	220	5%	1/4W
R612	1-249-409-11	CARBON	220	5%	1/4W
⚠R621	1-212-851-00	FUSIBLE	5.6	5%	1/4W F
⚠R622	1-212-851-00	FUSIBLE	5.6	5%	1/4W F
R623	1-249-432-11	CARBON	18K	5%	1/4W
R624	1-249-432-11	CARBON	18K	5%	1/4W
R625	1-249-429-11	CARBON	10K	5%	1/4W
R651	1-247-856-00	CARBON	11K	5%	1/4W
R652	1-247-856-00	CARBON	11K	5%	1/4W
R653	1-249-441-11	CARBON	100K	5%	1/4W
		< VARIABLE RESISTOR >			
RV301	1-241-628-11	RES, ADJ, CARBON 2.2K			
RV311	1-241-628-11	RES, ADJ, CARBON 2.2K			
RV341	1-230-725-11	RES, ADJ, CARBON 220K			
RV401	1-241-628-11	RES, ADJ, CARBON 2.2K			
RV411	1-241-628-11	RES, ADJ, CARBON 2.2K			
RV441	1-230-725-11	RES, ADJ, CARBON 220K			
RV651	1-241-763-11	RES, ADJ, CARBON 4.7K			
RV652	1-241-763-11	RES, ADJ, CARBON 4.7K			
		< TRANSFORMER >			
T621	1-423-980-11	TRANSFORMER, BIAS OSCILLATION			

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*	A-4617-371-A	BD BOARD, COMPLETE			
		**********			
		< CAPACITOR >			
C101	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C102	1-163-989-11	CERAMIC CHIP	0.033uF	10%	25V
C103	1-126-157-11	ELECT	10uF	20%	16V
C104	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C105	1-126-154-11	ELECT	47uF	20%	6.3V
C106	1-126-154-11	ELECT	47uF	20%	6.3V
C107	1-126-154-11	ELECT	47uF	20%	6.3V
C108	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C109	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C110	1-163-989-11	CERAMIC CHIP	0.033uF	10%	25V
C111	1-131-367-00	TANTALUM	22uF	10%	20V
C112	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C113	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C114	1-164-161-11	CERAMIC CHIP	0.0022uF	10%	100V
C115	1-164-161-11	CERAMIC CHIP	0.0022uF	10%	100V
C117	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C118	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C119	1-164-161-11	CERAMIC CHIP	0.0022uF	10%	100V
C120	1-163-989-11	CERAMIC CHIP	0.033uF	10%	25V
C151	1-163-019-00	CERAMIC CHIP	0.0068uF	10%	50V
C152	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C153	1-163-006-11	CERAMIC CHIP	560PF	10%	50V
C154	1-164-161-11	CERAMIC CHIP	0.0022uF	10%	100V
C155	1-163-023-00	CERAMIC CHIP	0.015uF	5%	50V
C171	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C172	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C173	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C174	1-163-038-00	CERAMIC CHIP	0.1uF		25V
		< CONNECTOR >			
CN101	1-568-796-11	SOCKET, CONNECTOR 22P			
CN102	1-568-795-11	SOCKET, CONNECTOR 12P			
		< IC >			
IC101	8-752-058-77	IC CXA1372AQ			
IC102	8-759-822-36	IC LA6532M			
		< JUMPER RESISTOR >			
J101	1-216-295-91	METAL GLAZE	0	5%	1/10W
J102	1-216-295-91	METAL GLAZE	0	5%	1/10W
		< TRANSISTOR >			
Q101	8-729-901-01	TRANSISTOR DTC144EK			
		< RESISTOR >			
R101	1-216-097-00	METAL CHIP	100K	5%	1/10W
R102	1-216-095-00	METAL CHIP	82K	5%	1/10W
R103	1-216-091-00	METAL CHIP	56K	5%	1/10W
R104	1-216-099-00	METAL CHIP	120K	5%	1/10W
R105	1-216-069-00	METAL CHIP	6.8K	5%	1/10W
R106	1-216-061-00	METAL CHIP	3.3K	5%	1/10W
R107	1-216-114-00	METAL GLAZE	510K	5%	1/10W
R108	1-216-105-00	METAL CHIP	220K	5%	1/10W
R109	1-216-061-00	METAL CHIP	3.3K	5%	1/10W
R110	1-216-049-00	METAL CHIP	1K	5%	1/10W
R111	1-216-049-00	METAL CHIP	1K	5%	1/10W
R112	1-216-083-00	METAL CHIP	27K	5%	1/10W
R113	1-216-071-00	METAL CHIP	8.2K	5%	1/10W
R114	1-216-105-00	METAL CHIP	220K	5%	1/10W
R152	1-216-073-00	METAL CHIP	10K	5%	1/10W

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.	Les components identifiés par une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

Ref.No.	Part No.	Description			Remark
R153	1-216-085-00	METAL CHIP	33K	5%	1/10W
R154	1-216-085-00	METAL CHIP	33K	5%	1/10W
R155	1-216-093-00	METAL CHIP	68K	5%	1/10W
R156	1-216-081-00	METAL CHIP	22K	5%	1/10W
R157	1-216-079-00	METAL CHIP	18K	5%	1/10W
R158	1-216-079-00	METAL CHIP	18K	5%	1/10W
R159	1-216-079-00	METAL CHIP	18K	5%	1/10W
R160	1-216-049-00	METAL CHIP	1K	5%	1/10W
R171	1-216-001-00	METAL CHIP	10	5%	1/10W
R172	1-216-001-00	METAL CHIP	10	5%	1/10W
R173	1-216-001-00	METAL CHIP	10	5%	1/10W
R174	1-216-001-00	METAL CHIP	10	5%	1/10W
		< VARIABLE RESISTOR >			
RV101	1-238-600-11	RES, ADJ, CARBON 10K			
RV101	1-241-630-11	RES, ADJ, CARBON 10K			
RV102	1-238-600-11	RES, ADJ, CARBON 10K			
RV102	1-241-630-11	RES, ADJ, CARBON 10K			
		< SWITCH >			
S101	1-572-085-11	SWITCH, LEAF			
**********					
*	A-4369-799-A	CD BOARD, COMPLETE			
		**********			
		< INDUCTOR >			
B103	1-412-473-21	INDUCTOR	0uH		
B104	1-412-473-21	INDUCTOR	0uH		
B105	1-412-473-21	INDUCTOR	0uH		
B119	1-412-473-21	INDUCTOR	0uH		
B184	1-412-473-21	INDUCTOR	0uH		
B308	1-412-473-21	INDUCTOR	0uH		
B312	1-412-473-21	INDUCTOR	0uH		
B313	1-412-473-21	INDUCTOR	0uH		
		< CAPACITOR >			
C111	1-124-472-11	ELECT	470uF	20%	10V
C112	1-164-159-11	CERAMIC	0.1uF		50V
C113	1-124-903-11	ELECT	1uF	20%	50V
C114	1-124-443-00	ELECT	100uF	20%	10V
C115	1-124-903-11	ELECT	1uF	20%	50V
C117	1-164-159-11	CERAMIC	0.1uF		50V
C118	1-124-443-00	ELECT	100uF	20%	10V
C121	1-164-159-11	CERAMIC	0.1uF		50V
C122	1-124-472-11	ELECT	470uF	20%	10V
C131	1-161-379-00	CERAMIC	0.01uF	20%	25V
C132	1-124-472-11	ELECT	470uF	20%	10V
C151	1-161-379-00	CERAMIC	0.01uF	20%	25V
C152	1-136-173-00	FILM	0.47uF	5%	50V
C153	1-161-379-00	CERAMIC	0.01uF	20%	25V
C154	1-161-374-11	CERAMIC	0.0015uF	20%	50V
C155	1-136-161-00	FILM	0.047uF	5%	50V

Ref.No.	Part No.	Description			Remark
C161	1-164-159-11	CERAMIC	0.1uF		50V
C170	1-164-159-11	CERAMIC	0.1uF		50V
C171	1-124-443-00	ELECT	100uF	20%	10V
C172	1-124-903-11	ELECT	1uF	20%	50V
C173	1-124-903-11	ELECT	1uF	20%	50V
C174	1-164-159-11	CERAMIC	0.1uF		50V
C175	1-124-604-00	ELECT	330uF	20%	10V
C176	1-164-159-11	CERAMIC	0.1uF		50V
C177	1-124-916-11	ELECT	22uF	20%	63V
C178	1-124-473-11	ELECT	1000uF	20%	10V
C181	1-164-159-11	CERAMIC	0.1uF		50V
C201	1-136-165-00	FILM	0.1uF	5%	50V
C202	1-124-443-00	ELECT	100uF	20%	10V
C203	1-136-165-00	FILM	0.1uF	5%	50V
C204	1-124-443-00	ELECT	100uF	20%	10V
C206	1-124-443-00	ELECT	100uF	20%	10V
C207	1-136-165-00	FILM	0.1uF	5%	50V
C208	1-164-019-11	CERAMIC	10PF	0.5PF	50V
C209	1-164-019-11	CERAMIC	10PF	0.5PF	50V
C211	1-130-479-00	MYLAR	0.0047uF	5%	50V
C212	1-130-479-00	MYLAR	0.0047uF	5%	50V
C213	1-124-907-11	ELECT	10uF	20%	50V
C214	1-124-907-11	ELECT	10uF	20%	50V
C251	1-161-377-00	CERAMIC	0.0047uF	20%	16V
C252	1-162-294-31	CERAMIC	0.001uF	10%	50V
C301	1-164-159-11	CERAMIC	0.1uF		50V
C399	1-162-284-31	CERAMIC	150PF	10%	50V
		< CONNECTOR >			
*CN101	1-764-108-11	CONNECTOR, FFC 22P			
*CN102	1-564-710-11	PIN, CONNECTOR (SMALL TYPE) 8P			
CN103	1-506-468-11	PIN, CONNECTOR 3P			
*CN104	1-564-706-11	PIN, CONNECTOR (SMALL TYPE) 4P			
*CN105	1-573-085-11	CONNECTOR, FPC (NON ZIF) 19P			
CN106	1-695-342-31	PIN, CONNECTOR (PC BOARD) 19P			
*CN107	1-568-951-11	PIN, CONNECTOR 2P			
		< DIODE >			
D102	8-719-109-98	DIODE	RD6.8ES-B3		
D103	8-719-010-29	DIODE	UZ-4.3BSB		
D104	8-719-987-63	DIODE	1N4148M		
D107	8-719-109-87	DIODE	RD5.6ES-B		
D300	8-719-987-63	DIODE	1N4148M		
		< IC >			
IC101	8-759-821-93	IC	LA5601		
IC102	8-759-165-81	IC	PST600D-T		
IC103	8-759-291-61	IC	uPD78054GC-025-3B9		
IC104	8-759-277-68	IC	LB1648		
IC106	8-759-277-67	IC	TC9293N		
IC107	8-752-371-46	IC	CXD2507Q		
IC109	8-759-821-93	IC	LA5601		

CD | CD SW

Ref.No.	Part No.	Description			Remark
		< COIL >			
L300	1-410-525-11	INDUCTOR	220uH		
L301	1-410-525-11	INDUCTOR	220uH		
		< TRANSISTOR >			
Q101	8-729-620-05	TRANSISTOR	2SC2603-EF		
Q102	8-729-900-80	TRANSISTOR	DTC114ES		
Q103	8-729-900-80	TRANSISTOR	DTC114ES		
		< RESISTOR >			
R106	1-249-429-11	CARBON	10K	5%	1/4W
R107	1-249-429-11	CARBON	10K	5%	1/4W
R108	1-249-429-11	CARBON	10K	5%	1/4W
R109	1-249-429-11	CARBON	10K	5%	1/4W
R110	1-249-429-11	CARBON	10K	5%	1/4W
R111	1-249-425-11	CARBON	4.7K	5%	1/4W
R112	1-249-425-11	CARBON	4.7K	5%	1/4W
R113	1-249-425-11	CARBON	4.7K	5%	1/4W
R114	1-249-425-11	CARBON	4.7K	5%	1/4W
R115	1-249-425-11	CARBON	4.7K	5%	1/4W
R116	1-249-425-11	CARBON	4.7K	5%	1/4W
R117	1-249-429-11	CARBON	10K	5%	1/4W
R118	1-249-429-11	CARBON	10K	5%	1/4W
R119	1-249-429-11	CARBON	10K	5%	1/4W
R120	1-249-429-11	CARBON	10K	5%	1/4W
R121	1-247-807-31	CARBON	100	5%	1/4W
R122	1-247-807-31	CARBON	100	5%	1/4W
R123	1-247-807-31	CARBON	100	5%	1/4W
R124	1-247-807-31	CARBON	100	5%	1/4W
R125	1-247-807-31	CARBON	100	5%	1/4W
R126	1-249-425-11	CARBON	4.7K	5%	1/4W
R127	1-249-429-11	CARBON	10K	5%	1/4W
R128	1-249-393-11	CARBON	10	5%	1/4W
R129	1-249-423-11	CARBON	3.3K	5%	1/4W
R130	1-249-423-11	CARBON	3.3K	5%	1/4W
R131	1-249-423-11	CARBON	3.3K	5%	1/4W
R132	1-249-423-11	CARBON	3.3K	5%	1/4W
R133	1-249-429-11	CARBON	10K	5%	1/4W
R134	1-249-429-11	CARBON	10K	5%	1/4W
R135	1-247-807-31	CARBON	100	5%	1/4W
R136	1-247-807-31	CARBON	100	5%	1/4W
R137	1-247-807-31	CARBON	100	5%	1/4W
R138	1-247-807-31	CARBON	100	5%	1/4W
R139	1-249-412-11	CARBON	390	5%	1/4W
R139	1-249-415-11	CARBON	680	5%	1/4W
R141	1-249-417-11	CARBON	1K	5%	1/4W
R143	1-247-896-11	CARBON	510K	5%	1/4W
R145	1-249-423-11	CARBON	3.3K	5%	1/4W
R147	1-249-423-11	CARBON	3.3K	5%	1/4W
R148	1-249-413-11	CARBON	470	5%	1/4W
R149	1-247-807-31	CARBON	100	5%	1/4W
R151	1-249-418-11	CARBON	1.2K	5%	1/4W
R152	1-249-418-11	CARBON	1.2K	5%	1/4W
R153	1-249-441-11	CARBON	100K	5%	1/4W
R154	1-249-429-11	CARBON	10K	5%	1/4W
R155	1-249-423-11	CARBON	3.3K	5%	1/4W
R156	1-249-423-11	CARBON	3.3K	5%	1/4W
R157	1-249-429-11	CARBON	10K	5%	1/4W
R201	1-249-409-11	CARBON	220	5%	1/4W
R211	1-249-409-11	CARBON	220	5%	1/4W
R212	1-249-409-11	CARBON	220	5%	1/4W
R300	1-260-064-11	CARBON	1	5%	1/2W
R301	1-249-421-11	CARBON	2.2K	5%	1/4W
R302	1-249-421-11	CARBON	2.2K	5%	1/4W
R303	1-249-430-11	CARBON	12K	5%	1/4W
R304	1-249-430-11	CARBON	12K	5%	1/4W
R305	1-249-429-11	CARBON	10K	5%	1/4W
R306	1-249-417-11	CARBON	1K	5%	1/4W
R307	1-249-425-11	CARBON	4.7K	5%	1/4W
R309	1-260-064-11	CARBON	1	5%	1/2W
R310	1-249-425-11	CARBON	4.7K	5%	1/4W
		< VIBRATOR >			
X101	1-577-358-21	VIBRATOR, CERAMIC (4MHz)			
X201	1-567-908-11	VIBRATOR, CRYSTAL (16.9MHz)			

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* A-4369-797-A CD SW BOARD, COMPLETE

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< CONNECTOR >

CN801 1-766-522-11 SOCKET, CONNECTOR 19P

< DIODE >

D801 8-719-301-43 LED SEL2410E-C-TP6 (DISC 1)
D802 8-719-301-43 LED SEL2410E-C-TP6 (DISC 2)
D803 8-719-301-43 LED SEL2410E-C-TP6 (DISC 3)
D804 8-719-301-43 LED SEL2410E-C-TP6 (DISC 4)
D805 8-719-301-43 LED SEL2410E-C-TP6 (DISC 5)

D806 8-719-045-13 LED SEL2910A-TP6 (DISC 1)
D807 8-719-045-13 LED SEL2910A-TP6 (DISC 2)
D808 8-719-045-13 LED SEL2910A-TP6 (DISC 3)
D809 8-719-045-13 LED SEL2910A-TP6 (DISC 4)
D810 8-719-045-13 LED SEL2910A-TP6 (DISC 5)

< TRANSISTOR >

Q801 8-729-602-36 TRANSISTOR 2SA1602-F
Q802 8-729-602-36 TRANSISTOR 2SA1602-F

CD SW | COUNT SW | DISC SENS (A) | DISC SENS (B)

Ref.No.	Part No.	Description			Remark
Q803	8-729-602-21	TRANSISTOR	2SC4154-F		
Q804	8-729-602-21	TRANSISTOR	2SC4154-F		
Q805	8-729-602-21	TRANSISTOR	2SC4154-F		
Q806	8-729-602-21	TRANSISTOR	2SC4154-F		
Q807	8-729-602-21	TRANSISTOR	2SC4154-F		
		< RESISTOR >			
R801	1-216-041-00	METAL CHIP	470	5%	1/10W
R802	1-216-041-00	METAL CHIP	470	5%	1/10W
R803	1-216-041-00	METAL CHIP	470	5%	1/10W
R804	1-216-045-00	METAL CHIP	680	5%	1/10W
R805	1-216-045-00	METAL CHIP	680	5%	1/10W
R806	1-216-045-00	METAL CHIP	680	5%	1/10W
R807	1-216-049-00	METAL CHIP	1K	5%	1/10W
R808	1-216-049-00	METAL CHIP	1K	5%	1/10W
R809	1-216-049-00	METAL CHIP	1K	5%	1/10W
R810	1-216-053-00	METAL CHIP	1.5K	5%	1/10W
R811	1-216-053-00	METAL CHIP	1.5K	5%	1/10W
R812	1-216-053-00	METAL CHIP	1.5K	5%	1/10W
R813	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R814	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R815	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R816	1-216-065-00	METAL CHIP	4.7K	5%	1/10W
R817	1-216-065-00	METAL CHIP	4.7K	5%	1/10W
R818	1-216-065-00	METAL CHIP	4.7K	5%	1/10W
R819	1-216-075-00	METAL CHIP	12K	5%	1/10W
R820	1-216-075-00	METAL CHIP	12K	5%	1/10W
R821	1-216-075-00	METAL CHIP	12K	5%	1/10W
R831	1-216-037-00	METAL CHIP	330	5%	1/10W
R832	1-216-029-00	METAL CHIP	150	5%	1/10W
R833	1-216-029-00	METAL CHIP	150	5%	1/10W
R834	1-216-029-00	METAL CHIP	150	5%	1/10W
R835	1-216-037-00	METAL CHIP	330	5%	1/10W
R836	1-216-037-00	METAL CHIP	330	5%	1/10W
R837	1-216-029-00	METAL CHIP	150	5%	1/10W
R838	1-216-029-00	METAL CHIP	150	5%	1/10W
R839	1-216-029-00	METAL CHIP	150	5%	1/10W
R840	1-216-037-00	METAL CHIP	330	5%	1/10W
R841	1-216-073-00	METAL CHIP	10K	5%	1/10W
R842	1-216-073-00	METAL CHIP	10K	5%	1/10W
R843	1-216-073-00	METAL CHIP	10K	5%	1/10W
R844	1-216-073-00	METAL CHIP	10K	5%	1/10W
R845	1-216-073-00	METAL CHIP	10K	5%	1/10W
R846	1-216-073-00	METAL CHIP	10K	5%	1/10W
R847	1-216-073-00	METAL CHIP	10K	5%	1/10W
R848	1-216-073-00	METAL CHIP	10K	5%	1/10W
R849	1-216-073-00	METAL CHIP	10K	5%	1/10W

Ref.No.	Part No.	Description	Remark
		< SWITCH >	
S801	1-554-303-21	SWITCH, TACTILE (⏭)	
S802	1-554-303-21	SWITCH, TACTILE (⏮)	
S803	1-554-303-21	SWITCH, TACTILE (■)	
S804	1-554-303-21	SWITCH, TACTILE (DISC 1)	
S805	1-554-303-21	SWITCH, TACTILE (DISC 1 ⏏)	
S806	1-554-303-21	SWITCH, TACTILE (▶)	
S807	1-554-303-21	SWITCH, TACTILE (DISC 2)	
S808	1-554-303-21	SWITCH, TACTILE (DISC 2 ⏏)	
S809	1-554-303-21	SWITCH, TACTILE (❚❚)	
S810	1-554-303-21	SWITCH, TACTILE (DISC 3)	
S811	1-554-303-21	SWITCH, TACTILE (DISC 3 ⏏)	
S813	1-554-303-21	SWITCH, TACTILE (DISC 4)	
S814	1-554-303-21	SWITCH, TACTILE (DISC 4 ⏏)	
S815	1-554-303-21	SWITCH, TACTILE (CONTINUE)	
S816	1-554-303-21	SWITCH, TACTILE (DISC 5)	
S817	1-554-303-21	SWITCH, TACTILE (DISC 5 ⏏)	
S818	1-554-303-21	SWITCH, TACTILE (SHUFFLE)	
S819	1-554-303-21	SWITCH, TACTILE (EDIT)	
S820	1-554-303-21	SWITCH, TACTILE (CHECK)	
S821	1-554-303-21	SWITCH, TACTILE (PROGRAM)	
S822	1-554-303-21	SWITCH, TACTILE (MUSIC SCAN)	
S823	1-554-303-21	SWITCH, TACTILE (CLEAR)	
S824	1-554-303-21	SWITCH, TACTILE (REPEAT)	
S8001	1-572-126-11	SWITCH, PUSH (1 KEY) (PANEL SW)	
**********			
*	1-651-397-11	COUNT SW BOARD	
		**********	
		< SWITCH >	
SW502	1-692-193-11	SWITCH, PUSH (1 KEY)	
SW503	1-572-126-11	SWITCH, PUSH (1 KEY)	
**********			
*	1-651-398-11	DISC SENS (A) BOARD	
		**********	
		< DIODE >	
D501	8-719-029-95	DIODE TLN117-B	
**********			
*	1-651-399-11	DISC SENS (B) BOARD	
		**********	
		< CONNECTOR >	
*CN510	1-568-941-11	PIN, CONNECTOR 3P	

DISC SENS (B) FL

Ref.No.	Part No.	Description			Remark
		< TRANSISTOR >			
Q501	8-729-018-23	TRANSISTOR TPS626-B			
		< RESISTOR >			
R502	1-249-425-11	CARBON	4.7K	5% 1/4W	
**********					
*	A-4369-794-A	FL BOARD, COMPLETE			
		**********			
*	4-955-901-01	CUSHION (FL)			
*	4-959-227-01	HOLDER, LED			
*	4-965-854-01	HOLDER (FL TUBE)			
		< CAPACITOR >			
C901	1-165-319-11	CERAMIC CHIP	0.1uF		50V
C902	1-165-319-11	CERAMIC CHIP	0.1uF		50V
C903	1-165-319-11	CERAMIC CHIP	0.1uF		50V
C904	1-124-261-00	ELECT	10uF	20%	50V
C905	1-165-319-11	CERAMIC CHIP	0.1uF		50V
C906	1-124-584-00	ELECT	100uF	20%	10V
C907	1-126-160-11	ELECT	1uF	20%	50V
C908	1-165-319-11	CERAMIC CHIP	0.1uF		50V
C909	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C910	1-126-157-11	ELECT	10uF	20%	16V
C911	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C912	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C913	1-124-584-00	ELECT	100uF	20%	10V
C914	1-165-319-11	CERAMIC CHIP	0.1uF		50V
C915	1-163-141-00	CERAMIC CHIP	0.001uF	5%	50V
C916	1-163-141-00	CERAMIC CHIP	0.001uF	5%	50V
C917	1-163-141-00	CERAMIC CHIP	0.001uF	5%	50V
C918	1-163-141-00	CERAMIC CHIP	0.001uF	5%	50V
C919	1-163-141-00	CERAMIC CHIP	0.001uF	5%	50V
C920	1-165-319-11	CERAMIC CHIP	0.1uF		50V
C921	1-165-319-11	CERAMIC CHIP	0.1uF		50V
C922	1-165-319-11	CERAMIC CHIP	0.1uF		50V
C923	1-124-261-00	ELECT	10uF	20%	50V
C924	1-165-319-11	CERAMIC CHIP	0.1uF		50V
C925	1-165-319-11	CERAMIC CHIP	0.1uF		50V
C926	1-124-257-00	ELECT	2.2uF	20%	50V
C927	1-124-257-00	ELECT	2.2uF	20%	50V
C928	1-165-319-11	CERAMIC CHIP	0.1uF		50V
C929	1-124-465-00	ELECT	0.47uF	20%	50V
C930	1-124-257-00	ELECT	2.2uF	20%	50V
C931	1-163-037-11	CERAMIC CHIP	0.022uF	10%	25V
C932	1-165-319-11	CERAMIC CHIP	0.1uF		50V
C933	1-124-257-00	ELECT	2.2uF	20%	50V
C934	1-163-017-00	CERAMIC CHIP	0.0047uF	5%	50V
C935	1-163-037-11	CERAMIC CHIP	0.022uF	10%	25V
C936	1-124-257-00	ELECT	2.2uF	20%	50V
C937	1-163-011-11	CERAMIC CHIP	0.0015uF	10%	50V
C938	1-124-257-00	ELECT	2.2uF	20%	50V
C939	1-163-099-00	CERAMIC CHIP	18PF	5%	50V
C940	1-163-235-11	CERAMIC CHIP	22PF	5%	50V
		< CONNECTOR >			
CN901	1-766-320-11	SOCKET, CONNECTOR 21P			
CN902	1-691-644-11	SOCKET, CONNECTOR 7P			
		< DIODE >			
D901	8-719-106-08	DIODE	RD6.2M-B2		
D902	8-719-104-34	DIODE	1S2836		
D904	8-719-041-97	DIODE	MA113-TX		
D905	8-719-041-97	DIODE	MA113-TX		
D906	8-719-041-97	DIODE	MA113-TX		
D907	8-719-106-08	DIODE	RD6.2M-B2		
D908	8-719-990-39	DIODE	DCB010		
D909	8-719-990-39	DIODE	DCB010		
D910	8-719-990-39	DIODE	DCB010		
D911	8-719-990-39	DIODE	DCB010		
D912	8-719-990-39	DIODE	DCB010		
D953	8-719-313-64	LED	SEL3210S-CD (PRESET)		
D955	8-719-301-38	LED	SEL2210S-C-TP6S (DBFB HIGH)		
D956	8-719-301-38	LED	SEL2210S-C-TP6S (DBFB NORMAL)		
		< FLUORESCENT INDICATOR TUBE >			
FL901	1-517-308-11	INDICATOR TUBE, FLUORESCENT			
		< IC >			
IC901	8-759-271-01	IC	uPD78042GF-074-3B9		
IC902	8-759-504-12	IC	X24C01S		
IC904	8-749-923-64	IC	NJM32H400		
IC905	8-759-167-83	IC	PST600EMT-T1		
		< JUMPER RESISTOR >			
JW851	1-216-296-91	METAL GLAZE	0	5% 1/8W	
JW852	1-216-296-91	METAL GLAZE	0	5% 1/8W	
JW853	1-216-296-91	METAL GLAZE	0	5% 1/8W	
JW9170	1-216-295-91	METAL GLAZE	0	5% 1/10W	
JW9180	1-216-295-91	METAL GLAZE	0	5% 1/10W	
JW9190	1-216-295-91	METAL GLAZE	0	5% 1/10W	
		< COIL >			
L901	1-408-789-21	INDUCTOR CHIP	100uH		
L902	1-408-789-21	INDUCTOR CHIP	100uH		

FL

Ref.No.	Part No.	Description			Remark
		< TRANSISTOR >			
Q901	8-729-602-21	TRANSISTOR	2SC4154-F		
Q902	8-729-805-65	TRANSISTOR	2SA1344		
Q903	8-729-805-41	TRANSISTOR	2SC3398		
Q904	8-729-602-21	TRANSISTOR	2SC4154-F		
Q905	8-729-805-41	TRANSISTOR	2SC3398		
Q906	8-729-805-41	TRANSISTOR	2SC3398		
		< RESISTOR >			
R901	1-216-062-00	METAL CHIP	3.6K	5% 1/10W	
R902	1-216-025-00	METAL CHIP	100	5% 1/10W	
R903	1-216-025-00	METAL CHIP	100	5% 1/10W	
R904	1-216-025-00	METAL CHIP	100	5% 1/10W	
R905	1-216-025-00	METAL CHIP	100	5% 1/10W	
R906	1-216-025-00	METAL CHIP	100	5% 1/10W	
R907	1-216-025-00	METAL CHIP	100	5% 1/10W	
R908	1-216-025-00	METAL CHIP	100	5% 1/10W	
R909	1-216-025-00	METAL CHIP	100	5% 1/10W	
R910	1-216-115-00	METAL CHIP	560K	5% 1/10W	
R911	1-216-053-00	METAL CHIP	1.5K	5% 1/10W	
R912	1-216-053-00	METAL CHIP	1.5K	5% 1/10W	
R913	1-216-025-00	METAL CHIP	100	5% 1/10W	
R914	1-216-025-00	METAL CHIP	100	5% 1/10W	
R915	1-216-025-00	METAL CHIP	100	5% 1/10W	
R916	1-216-073-00	METAL CHIP	10K	5% 1/10W	
R917	1-216-073-00	METAL CHIP	10K	5% 1/10W	
R918	1-216-025-00	METAL CHIP	100	5% 1/10W	
R919	1-216-025-00	METAL CHIP	100	5% 1/10W	
R920	1-216-025-00	METAL CHIP	100	5% 1/10W	
R921	1-216-025-00	METAL CHIP	100	5% 1/10W	
R922	1-216-025-00	METAL CHIP	100	5% 1/10W	
R923	1-216-025-00	METAL CHIP	100	5% 1/10W	
R924	1-216-089-00	METAL GLAZE	47K	5% 1/10W	
R925	1-216-089-00	METAL GLAZE	47K	5% 1/10W	
R926	1-216-089-00	METAL GLAZE	47K	5% 1/10W	
R927	1-216-089-00	METAL GLAZE	47K	5% 1/10W	
R928	1-216-089-00	METAL GLAZE	47K	5% 1/10W	
R929	1-216-089-00	METAL GLAZE	47K	5% 1/10W	
R930	1-216-089-00	METAL GLAZE	47K	5% 1/10W	
R931	1-216-089-00	METAL GLAZE	47K	5% 1/10W	
R932	1-216-089-00	METAL GLAZE	47K	5% 1/10W	
R933	1-216-089-00	METAL GLAZE	47K	5% 1/10W	
R934	1-216-089-00	METAL GLAZE	47K	5% 1/10W	
R935	1-216-089-00	METAL GLAZE	47K	5% 1/10W	
R936	1-216-089-00	METAL GLAZE	47K	5% 1/10W	
R937	1-216-089-00	METAL GLAZE	47K	5% 1/10W	
R938	1-216-089-00	METAL GLAZE	47K	5% 1/10W	
R939	1-216-089-00	METAL GLAZE	47K	5% 1/10W	

Ref.No.	Part No.	Description			Remark
R940	1-216-089-00	METAL GLAZE	47K	5% 1/10W	
R941	1-216-089-00	METAL GLAZE	47K	5% 1/10W	
R942	1-216-065-00	METAL CHIP	4.7K	5% 1/10W	
R943	1-216-073-00	METAL CHIP	10K	5% 1/10W	
R944	1-216-073-00	METAL CHIP	10K	5% 1/10W	
R945	1-216-089-00	METAL GLAZE	47K	5% 1/10W	
R946	1-216-089-00	METAL GLAZE	47K	5% 1/10W	
R947	1-216-121-00	METAL CHIP	1M	5% 1/10W	
R948	1-216-025-00	METAL CHIP	100	5% 1/10W	
R949	1-216-073-00	METAL CHIP	10K	5% 1/10W	
R950	1-216-049-00	METAL CHIP	1K	5% 1/10W	
R951	1-216-073-00	METAL CHIP	10K	5% 1/10W	
R952	1-216-073-00	METAL CHIP	10K	5% 1/10W	
R953	1-216-037-00	METAL CHIP	330	5% 1/10W	
R954	1-216-049-00	METAL CHIP	1K	5% 1/10W	
R955	1-216-025-00	METAL CHIP	100	5% 1/10W	
R956	1-216-027-00	METAL CHIP	120	5% 1/10W	
R957	1-216-027-00	METAL CHIP	120	5% 1/10W	
R958	1-216-029-00	METAL CHIP	150	5% 1/10W	
R959	1-216-031-00	METAL CHIP	180	5% 1/10W	
R960	1-216-033-00	METAL CHIP	220	5% 1/10W	
R961	1-216-035-00	METAL CHIP	270	5% 1/10W	
R962	1-216-037-00	METAL CHIP	330	5% 1/10W	
R963	1-216-041-00	METAL CHIP	470	5% 1/10W	
R964	1-216-043-00	METAL CHIP	560	5% 1/10W	
R970	1-216-025-00	METAL CHIP	100	5% 1/10W	
R971	1-216-027-00	METAL CHIP	120	5% 1/10W	
R972	1-216-027-00	METAL CHIP	120	5% 1/10W	
R973	1-216-029-00	METAL CHIP	150	5% 1/10W	
R974	1-216-031-00	METAL CHIP	180	5% 1/10W	
R975	1-216-033-00	METAL CHIP	220	5% 1/10W	
R976	1-216-035-00	METAL CHIP	270	5% 1/10W	
R977	1-216-037-00	METAL CHIP	330	5% 1/10W	
R978	1-216-041-00	METAL CHIP	470	5% 1/10W	
R979	1-216-043-00	METAL CHIP	560	5% 1/10W	
R980	1-216-061-00	METAL CHIP	3.3K	5% 1/10W	
R981	1-216-073-00	METAL CHIP	10K	5% 1/10W	
R982	1-216-077-00	METAL CHIP	15K	5% 1/10W	
R983	1-216-065-00	METAL CHIP	4.7K	5% 1/10W	
R985	1-216-044-00	METAL CHIP	620	5% 1/10W	
R986	1-216-095-00	METAL CHIP	82K	5% 1/10W	
R987	1-216-097-00	METAL CHIP	100K	5% 1/10W	
R988	1-216-049-00	METAL CHIP	1K	5% 1/10W	
R989	1-216-069-00	METAL CHIP	6.8K	5% 1/10W	
R990	1-216-097-00	METAL CHIP	100K	5% 1/10W	
R991	1-216-049-00	METAL CHIP	1K	5% 1/10W	
R992	1-216-073-00	METAL CHIP	10K	5% 1/10W	
R993	1-216-097-00	METAL CHIP	100K	5% 1/10W	

FL HP IN SW INTERRUPTER LEAF SW MAIN

Ref.No.	Part No.	Description			Remark
R994	1-216-049-00	METAL CHIP	1K	5%	1/10W
R995	1-216-073-00	METAL CHIP	10K	5%	1/10W
R996	1-216-097-00	METAL CHIP	100K	5%	1/10W
R997	1-216-072-00	METAL CHIP	9.1K	5%	1/10W
R998	1-216-097-00	METAL CHIP	100K	5%	1/10W
R999	1-216-025-00	METAL CHIP	100	5%	1/10W
R1000	1-216-049-00	METAL CHIP	1K	5%	1/10W
		< SWITCH >			
S901	1-554-303-21	SWITCH, TACTILE (SYSTEM POWER)			
S902	1-554-303-21	SWITCH, TACTILE (EFECT)			
S903	1-554-303-21	SWITCH, TACTILE (TIMER SET)			
S904	1-554-303-21	SWITCH, TACTILE (DAILY)			
S905	1-554-303-21	SWITCH, TACTILE (REC TIMER)			
S906	1-554-303-21	SWITCH, TACTILE (CLOCK SET)			
S907	1-554-303-21	SWITCH, TACTILE (EQ CONTROL ▲)			
S908	1-554-303-21	SWITCH, TACTILE (EQ CONTROL ▼)			
S909	1-554-303-21	SWITCH, TACTILE (DBFB)			
S910	1-554-303-21	SWITCH, TACTILE (S-SUR)			
S913	1-554-303-21	SWITCH, TACTILE (EQ PRESET)			
S914	1-554-303-21	SWITCH, TACTILE (MEMORY/EXT)			
S915	1-554-303-21	SWITCH, TACTILE (FUNCTION)			
S916	1-554-303-21	SWITCH, TACTILE (TUNER BAND)			
S917	1-554-303-21	SWITCH, TACTILE (PRESET/TUNING)			
S918	1-554-303-21	SWITCH, TACTILE (TUNER/TIMER -)			
S919	1-554-303-21	SWITCH, TACTILE (TUNER/TIMER +)			
S920	1-554-303-21	SWITCH, TACTILE (EQ CONTROL OFF)			
S921	1-554-303-21	SWITCH, TACTILE (EQ CONTROL ▶)			
S922	1-554-303-21	SWITCH, TACTILE (EQ CONTROL ◀)			
		< VIBRATOR >			
X901	1-577-359-21	VIBRATOR, CERAMIC (4.19MHz)			
X902	1-567-098-41	VIBRATOR, CRYSTAL (32.768kHz)			
**********					
*	1-652-281-11	HP BOARD			
		********			
		< CAPACITOR >			
C501	1-163-117-00	CERAMIC CHIP	100PF	5%	50V
C502	1-165-319-11	CERAMIC CHIP	0.1uF		50V
C551	1-163-117-00	CERAMIC CHIP	100PF	5%	50V
C552	1-165-319-11	CERAMIC CHIP	0.1uF		50V
		< JACK >			
J501	1-766-318-11	JACK (HEADPHONES)			
**********					
*	1-651-395-11	IN SW BOARD			
		**********			
		< CONNECTOR >			
*CN502	1-568-951-11	PIN, CONNECTOR 2P			
		< SWITCH >			
SW501	1-692-193-11	SWITCH, PUSH (1 KEY)			
**********					
*	1-651-393-11	INTERRUPTER BOARD			
		**********			
	4-964-461-01	HOLDER (SENSOR)			
		< IC >			
IC501	8-729-020-74	IC GP1S24			
**********					
*	1-650-669-11	LEAF SW BOARD			
		**********			
*	3-381-776-01	HOLDER (LED)			
		< CONNECTOR >			
*CN1001	1-568-854-11	SOCKET, CONNECTOR 11P			
		< TRANSISTOR >			
Q1001	8-719-710-02	TRANSISTOR PHOTO REFLECTOR NJL5165K-A			
Q1002	8-719-710-02	TRANSISTOR PHOTO REFLECTOR NJL5165K-A			
		< RESISTOR >			
R1001	1-249-412-11	CARBON	390	5%	1/4W
R1002	1-249-412-11	CARBON	390	5%	1/4W
R1003	1-249-414-11	CARBON	560	5%	1/4W
R1004	1-247-834-11	CARBON	1.3K	5%	1/4W
R1005	1-247-818-11	CARBON	300	5%	1/4W
		< SWITCH >			
S1001	1-692-832-11	SWITCH, PUSH (1 KEY) (A PLAY)			
S1002	1-692-832-11	SWITCH, PUSH (1 KEY) (B PLAY)			
S1004	1-571-281-21	SWITCH, LEAF (A Cr02)			
S1005	1-571-281-21	SWITCH, LEAF (REC A)			
S1006	1-572-248-11	SWITCH, LEAF (B HALF)			
S1007	1-572-248-11	SWITCH, LEAF (B METAL)			
S1008	1-571-281-21	SWITCH, LEAF (B Cr02)			
S1009	1-571-281-21	SWITCH, LEAF (REC B)			
**********					
*	A-4369-789-A	MAIN BOARD, COMPLETE			
		**********			
	1-533-293-11	FUSE HOLDER			
*	4-886-555-00	HEAT SINK			
*	4-942-204-01	PLATE, GROUND			
	7-685-646-81	SCREW +BVTP 3X8 TYPE2			
		< CAPACITOR >			
C109	1-124-927-11	ELECT	4.7uF	20%	100V
C110	1-162-215-31	CERAMIC	47PF	5%	50V

Ref.No.	Part No.	Description			Remark
C112	1-162-215-31	CERAMIC	47PF	5%	50V
C115	1-124-927-11	ELECT	4.7uF	20%	100V
C116	1-162-282-31	CERAMIC	100PF	10%	50V
C117	1-162-286-31	CERAMIC	220PF	10%	50V
C118	1-161-379-00	CERAMIC	0.01uF	20%	25V
C119	1-161-379-00	CERAMIC	0.01uF	20%	25V
C120	1-106-359-00	MYLAR	4700PF	5%	200V
C121	1-162-287-31	CERAMIC	270PF	10%	50V
C122	1-130-487-00	MYLAR	0.022uF	5%	50V
C123	1-106-343-00	MYLAR	1000PF	5%	200V
C125	1-130-493-00	MYLAR	0.068uF	5%	50V
C126	1-130-493-00	MYLAR	0.068uF	5%	50V
C127	1-130-485-00	MYLAR	0.015uF	5%	50V
C128	1-130-478-00	MYLAR	0.0039uF	5%	50V
C130	1-124-903-11	ELECT	1uF	20%	50V
C131	1-124-903-11	ELECT	1uF	20%	50V
C132	1-136-171-00	FILM	0.33uF	5%	50V
C133	1-130-494-11	MYLAR	0.082uF	5%	50V
C134	1-124-927-11	ELECT	4.7uF	20%	100V
C136	1-162-282-31	CERAMIC	100PF	10%	50V
C141	1-124-925-11	ELECT	2.2uF	20%	100V
C142	1-124-925-11	ELECT	2.2uF	20%	100V
C143	1-126-101-11	ELECT	100uF	20%	16V
C144	1-161-379-00	CERAMIC	0.01uF	20%	25V
C149	1-124-477-11	ELECT	47uF	20%	25V
C150	1-124-927-11	ELECT	4.7uF	20%	100V
C159	1-124-927-11	ELECT	4.7uF	20%	100V
C160	1-162-215-31	CERAMIC	47PF	5%	50V
C162	1-162-215-31	CERAMIC	47PF	5%	50V
C163	1-164-159-11	CERAMIC	0.1uF		50V
C165	1-124-927-11	ELECT	4.7uF	20%	100V
C166	1-162-282-31	CERAMIC	100PF	10%	50V
C167	1-162-286-31	CERAMIC	220PF	10%	50V
C168	1-161-379-00	CERAMIC	0.01uF	20%	25V
C169	1-161-379-00	CERAMIC	0.01uF	20%	25V
C170	1-106-359-00	MYLAR	4700PF	5%	200V
C171	1-162-287-31	CERAMIC	270PF	10%	50V
C172	1-130-487-00	MYLAR	0.022uF	5%	50V
C173	1-106-343-00	MYLAR	1000PF	5%	200V
C175	1-130-493-00	MYLAR	0.068uF	5%	50V
C176	1-130-493-00	MYLAR	0.068uF	5%	50V
C177	1-130-485-00	MYLAR	0.015uF	5%	50V
C178	1-130-478-00	MYLAR	0.0039uF	5%	50V
C180	1-124-903-11	ELECT	1uF	20%	50V
C181	1-124-903-11	ELECT	1uF	20%	50V
C182	1-136-171-00	FILM	0.33uF	5%	50V
C183	1-130-494-11	MYLAR	0.082uF	5%	50V
C184	1-124-927-11	ELECT	4.7uF	20%	100V
C186	1-162-282-31	CERAMIC	100PF	10%	50V
C190	1-161-379-00	CERAMIC	0.01uF	20%	25V
C191	1-161-379-00	CERAMIC	0.01uF	20%	25V
C199	1-164-159-11	CERAMIC	0.1uF		50V
C201	1-162-290-31	CERAMIC	470P	10%	50V

Ref.No.	Part No.	Description			Remark
C202	1-161-379-00	CERAMIC	0.01uF	20%	25V
C203	1-162-290-31	CERAMIC	470P	10%	50V
C701	1-124-604-00	ELECT	330uF	20%	10V
C702	1-126-927-11	ELECT	2200uF	20%	10V
C703	1-126-927-11	ELECT	2200uF	20%	10V
C704	1-124-925-11	ELECT	2.2uF	20%	100V
C705	1-124-927-11	ELECT	4.7uF	20%	100V
C706	1-164-159-11	CERAMIC	0.1uF		50V
C707	1-124-442-00	ELECT	330uF	20%	6.3V
C708	1-124-902-00	ELECT	0.47uF	20%	50V
C709	1-161-375-00	CERAMIC	0.0022uF	20%	50V
C710	1-124-907-11	ELECT	10uF	20%	50V
C711	1-124-477-11	ELECT	47uF	20%	25V
C712	1-124-478-11	ELECT	100uF	20%	25V
C713	1-124-910-11	ELECT	47uF	20%	50V
C714	1-124-910-11	ELECT	47uF	20%	50V
C715	1-124-910-11	ELECT	47uF	20%	50V
C716	1-124-478-11	ELECT	100uF	20%	25V

< CONNECTOR >

CN101	1-691-650-11	SOCKET, CONNECTOR 19P	
CN102	1-766-321-11	SOCKET, CONNECTOR 21P	
CN103	1-695-330-31	PIN, CONNECTOR (PC BOARD) 7P	
CN104	1-691-648-11	SOCKET, CONNECTOR 15P	
CN105	1-569-493-11	SOCKET, CONNECTOR 7P	
*CN106	1-565-561-11	PIN, CONNECTOR 3P	
*CN801	1-569-502-11	PIN, CONNECTOR 7P	
CN802	1-564-506-11	PLUG, CONNECTOR 3P	

< DIODE >

D101	8-719-987-63	DIODE	1N4148M
D102	8-719-000-60	DIODE	UZL-6M2
D103	8-719-987-63	DIODE	1N4148M
D703	8-719-987-63	DIODE	1N4148M
D706	8-719-200-82	DIODE	11ES2
D707	8-719-001-51	DIODE	UZL-11H1
D708	8-719-002-33	DIODE	UZL-24L

< FUSE >

F701	1-532-776-21	FUSE, MICRO (SECONDARY) (1A/125V)
F702	1-532-777-21	FUSE, MICRO (SECONDARY) (1.25A/125V)

< IC >

IC103	8-759-000-48	IC	MC14052BCP
IC106	8-759-635-31	IC	M50253P
IC107	8-759-634-50	IC	M5218AL
IC109	8-759-633-78	IC	M5289P
IC110	8-759-081-01	IC	NJU7305L
IC111	8-759-633-78	IC	M5289P
IC112	8-759-634-50	IC	M5218AL
IC701	8-759-602-66	IC	M5230L-A
IC702	8-759-231-53	IC	TA7805S

MAIN

Ref.No.	Part No.	Description	Remark
		< JACK >	
J101	1-569-181-11	JACK, PIN 2P (MD/VIDEO IN)	
J102	1-569-181-11	JACK, PIN 2P (MD/VIDEO OUT)	
		< TRANSISTOR >	
Q101	8-729-141-26	TRANSISTOR 2SC3622A-LK	
Q103	8-729-900-63	TRANSISTOR DTA124ES	
Q105	8-729-141-30	TRANSISTOR 2SC3623A-LK	
Q106	8-729-900-63	TRANSISTOR DTA124ES	
Q107	8-729-224-61	TRANSISTOR 2SK246-Y	
Q108	8-729-900-63	TRANSISTOR DTA124ES	
Q151	8-729-141-26	TRANSISTOR 2SC3622A-LK	
Q155	8-729-141-30	TRANSISTOR 2SC3623A-LK	
Q701	8-729-141-83	TRANSISTOR 2SB1094-LK	
Q702	8-729-209-15	TRANSISTOR 2SD2012	
Q704	8-729-209-15	TRANSISTOR 2SD2012	
Q705	8-729-900-36	TRANSISTOR DTC124ES	
Q706	8-729-900-36	TRANSISTOR DTC124ES	
Q707	8-729-900-89	TRANSISTOR DTC144ES	
Q708	8-729-209-15	TRANSISTOR 2SD2012	
Q709	8-729-620-05	TRANSISTOR 2SC2603-EF	
		< RESISTOR >	
R111	1-249-425-11	CARBON 4.7K 5% 1/4W	
R112	1-249-416-11	CARBON 820 5% 1/4W	
R114	1-249-429-11	CARBON 10K 5% 1/4W	
R115	1-249-425-11	CARBON 4.7K 5% 1/4W	
R116	1-249-425-11	CARBON 4.7K 5% 1/4W	
R117	1-249-436-11	CARBON 39K 5% 1/4W	
R118	1-249-436-11	CARBON 39K 5% 1/4W	
R120	1-247-854-11	CARBON 9.1K 5% 1/4W	
R124	1-249-423-11	CARBON 3.3K 5% 1/4W	
R125	1-247-852-11	CARBON 7.5K 5% 1/4W	
R126	1-247-903-00	CARBON 1M 5% 1/4W	
R127	1-247-903-00	CARBON 1M 5% 1/4W	
R129	1-247-903-00	CARBON 1M 5% 1/4W	
R130	1-247-903-00	CARBON 1M 5% 1/4W	
R131	1-247-903-00	CARBON 1M 5% 1/4W	
R132	1-247-903-00	CARBON 1M 5% 1/4W	
R133	1-249-429-11	CARBON 10K 5% 1/4W	
R134	1-249-421-11	CARBON 2.2K 5% 1/4W	
R135	1-249-441-11	CARBON 100K 5% 1/4W	
R136	1-249-417-11	CARBON 1K 5% 1/4W	
R137	1-249-437-11	CARBON 47K 5% 1/4W	
R138	1-249-429-11	CARBON 10K 5% 1/4W	
R139	1-249-429-11	CARBON 10K 5% 1/4W	
R142	1-249-417-11	CARBON 1K 5% 1/4W	

Ref.No.	Part No.	Description	Remark
R145	1-249-417-11	CARBON 1K 5% 1/4W	
R146	1-249-425-11	CARBON 4.7K 5% 1/4W	
R147	1-247-807-31	CARBON 100 5% 1/4W	
R148	1-247-903-00	CARBON 1M 5% 1/4W	
R149	1-249-441-11	CARBON 100K 5% 1/4W	
R150	1-249-433-11	CARBON 22K 5% 1/4W	
R161	1-249-425-11	CARBON 4.7K 5% 1/4W	
R162	1-249-416-11	CARBON 820 5% 1/4W	
R164	1-249-429-11	CARBON 10K 5% 1/4W	
R167	1-249-436-11	CARBON 39K 5% 1/4W	
R168	1-249-436-11	CARBON 39K 5% 1/4W	
R170	1-249-437-11	CARBON 47K 5% 1/4W	
R174	1-249-423-11	CARBON 3.3K 5% 1/4W	
R175	1-247-852-11	CARBON 7.5K 5% 1/4W	
R176	1-247-903-00	CARBON 1M 5% 1/4W	
R177	1-247-903-00	CARBON 1M 5% 1/4W	
R179	1-247-903-00	CARBON 1M 5% 1/4W	
R180	1-247-903-00	CARBON 1M 5% 1/4W	
R181	1-247-903-00	CARBON 1M 5% 1/4W	
R182	1-247-903-00	CARBON 1M 5% 1/4W	
R183	1-249-429-11	CARBON 10K 5% 1/4W	
R184	1-249-421-11	CARBON 2.2K 5% 1/4W	
R185	1-249-433-11	CARBON 22K 5% 1/4W	
R186	1-249-441-11	CARBON 100K 5% 1/4W	
R187	1-249-441-11	CARBON 100K 5% 1/4W	
R189	1-249-417-11	CARBON 1K 5% 1/4W	
R190	1-249-417-11	CARBON 1K 5% 1/4W	
R192	1-249-417-11	CARBON 1K 5% 1/4W	
R194	1-249-411-11	CARBON 330 5% 1/4W	
R195	1-249-411-11	CARBON 330 5% 1/4W	
R196	1-249-433-11	CARBON 22K 5% 1/4W	
R197	1-249-433-11	CARBON 22K 5% 1/4W	
R198	1-249-417-11	CARBON 1K 5% 1/4W	
R199	1-249-417-11	CARBON 1K 5% 1/4W	
R206	1-260-096-11	CARBON 560 5% 1/2W	
R207	1-260-096-11	CARBON 560 5% 1/2W	
R230	1-249-421-11	CARBON 2.2K 5% 1/4W	
R702	1-249-429-11	CARBON 10K 5% 1/4W	
R703	1-249-431-11	CARBON 15K 5% 1/4W	
R704	1-249-423-11	CARBON 3.3K 5% 1/4W	
R705	1-249-414-11	CARBON 560 5% 1/4W	
R706	1-249-414-11	CARBON 560 5% 1/4W	
R707	1-249-409-11	CARBON 220 5% 1/4W	
R708	1-249-431-11	CARBON 15K 5% 1/4W	
R709	1-249-429-11	CARBON 10K 5% 1/4W	
R710	1-249-409-11	CARBON 220 5% 1/4W	
R711	1-249-429-11	CARBON 10K 5% 1/4W	
R714	1-249-429-11	CARBON 10K 5% 1/4W	

Ref.No.	Part No.	Description			Remark
R715	1-249-441-11	CARBON	100K	5%	1/4W
R717	1-249-415-11	CARBON	680	5%	1/4W
R718	1-249-425-11	CARBON	4.7K	5%	1/4W
R719	1-249-415-11	CARBON	680	5%	1/4W
		< VARIABLE RESISTOR >			
RV301	1-223-674-11	RES, VAR, CARBON 100K/100K			
		< TERMINAL >			
TM101	1-537-238-21	TERMINAL BOARD (ANTENNA)			
TM901	1-537-240-11	TERMINAL BOARD (CHECKER PIN)			
**********					
*	1-651-392-11	MID SW BOARD			
		**********			
		< CONNECTOR >			
CN503	1-506-481-11	PIN, CONNECTOR 2P			
		< SWITCH >			
SW504	1-692-193-11	SWITCH, PUSH (1 KEY)			
**********					
*	1-651-394-11	O/C SW BOARD			
		**********			
		< CONNECTOR >			
CN512	1-506-481-11	PIN, CONNECTOR 2P			
*CN514	1-568-941-11	PIN, CONNECTOR 3P			
		< RESISTOR >			
R503	1-247-818-11	CARBON	300	5%	1/4W
R504	1-249-431-11	CARBON	15K	5%	1/4W
		< SWITCH >			
SW505	1-571-300-21	SWITCH, ROTARY			
**********					
*	A-4369-790-A	POWER BOARD, COMPLETE			
		**********			
		< CAPACITOR >			
C901	1-124-903-11	ELECT	1uF	20%	50V
C902	1-162-282-31	CERAMIC	100PF	10%	50V
C903	1-162-282-31	CERAMIC	100PF	10%	50V
C904	1-124-910-11	ELECT	47uF	20%	50V
C905	1-124-910-11	ELECT	47uF	20%	50V
C906	1-124-910-11	ELECT	47uF	20%	50V
C907	1-124-910-11	ELECT	47uF	20%	50V
C908	1-124-910-11	ELECT	47uF	20%	50V
C909	1-124-910-11	ELECT	47uF	20%	50V
C910	1-136-165-00	FILM	0.1uF	5%	50V
C911	1-136-165-00	FILM	0.1uF	5%	50V
C912	1-124-907-11	ELECT	10uF	20%	50V
C913	1-124-902-00	ELECT	0.47uF	20%	50V
C914	1-124-916-11	ELECT	22uF	20%	50V
C916	1-126-176-11	ELECT	220uF	20%	10V
C920	1-124-564-11	ELECT	4700uF	20%	25V
C921	1-124-564-11	ELECT	4700uF	20%	25V
C922	1-136-165-00	FILM	0.1uF	5%	50V
C923	1-136-165-00	FILM	0.1uF	5%	50V
C927	1-126-224-11	ELECT	4700uF	20%	42V
C928	1-126-224-11	ELECT	4700uF	20%	42V
C929	1-124-907-11	ELECT	10uF	20%	50V
C930	1-124-929-11	ELECT	22uF	20%	100V
C931	1-124-916-11	ELECT	22uF	20%	63V
C932	1-136-165-00	FILM	0.1uF	5%	50V
C933	1-136-165-00	FILM	0.1uF	5%	50V
C935	1-124-910-11	ELECT	47uF	20%	50V
C951	1-124-903-11	ELECT	1uF	20%	50V
C952	1-162-282-31	CERAMIC	100PF	10%	50V
C953	1-162-282-31	CERAMIC	100PF	10%	50V
C954	1-124-910-11	ELECT	47uF	20%	50V
C955	1-124-910-11	ELECT	47uF	20%	50V
C960	1-136-165-00	FILM	0.1uF	5%	50V
C961	1-136-165-00	FILM	0.1uF	5%	50V
		< DIODE >			
D901	8-719-312-09	DIODE	RBA-402		
D902	8-719-987-63	DIODE	1N4148M		
D903	8-719-200-82	DIODE	11ES2		
D904	8-719-200-82	DIODE	11ES2		
D905	8-719-934-22	DIODE	HZS30-2L		
D906	8-719-014-66	DIODE	UZP-5.6B		
D907	8-719-987-63	DIODE	1N4148M		
D911	8-719-200-82	DIODE	11ES2		
D912	8-719-200-82	DIODE	11ES2		
D913	8-719-200-82	DIODE	11ES2		
D914	8-719-200-82	DIODE	11ES2		
D921	8-719-987-63	DIODE	1N4148M		
D922	8-719-987-63	DIODE	1N4148M		
D945	8-719-987-63	DIODE	1N4148M		
D946	8-719-987-63	DIODE	1N4148M		
		< IC >			
IC901	8-749-941-52	IC	STK4152II		
IC902	8-759-111-68	IC	UPC1237HA		

POWER TC

Ref.No.	Part No.	Description				Remark
		< TRANSISTOR >				
Q901	8-729-141-83	TRANSISTOR	2SB1094-LK			
Q945	8-729-140-84	TRANSISTOR	2SC1841-PAFAEA			
Q950	8-729-900-63	TRANSISTOR	DTA124ES			
Q959	8-729-140-84	TRANSISTOR	2SC1841-PAFAEA			
		< RESISTOR >				
R901	1-249-417-11	CARBON	1K	5%	1/4W	
R902	1-249-438-11	CARBON	56K	5%	1/4W	
R903	1-249-418-11	CARBON	1.2K	5%	1/4W	
R904	1-249-438-11	CARBON	56K	5%	1/4W	
⚠R905	1-212-849-00	FUSIBLE	4.7	5%	1/4W	F
R906	1-249-421-11	CARBON	2.2K	5%	1/4W	
R907	1-249-421-11	CARBON	2.2K	5%	1/4W	
⚠R908	1-212-881-11	FUSIBLE	100	5%	1/4W	F
R909	1-260-099-11	CARBON	1K	5%	1/2W	
⚠R910	1-212-881-11	FUSIBLE	100	5%	1/4W	F
R911	1-260-099-11	CARBON	1K	5%	1/2W	
R912	1-249-417-11	CARBON	1K	5%	1/4W	
R913	1-249-431-11	CARBON	15K	5%	1/4W	
R914	1-249-441-11	CARBON	100K	5%	1/4W	
R915	1-249-438-11	CARBON	56K	5%	1/4W	
⚠R916	1-217-151-00	RES, METAL PLATE	0.22			F
R917	1-260-076-11	CARBON	10	5%	1/2W	
R918	1-249-433-11	CARBON	22K	5%	1/4W	
R919	1-249-441-11	CARBON	100K	5%	1/4W	
R920	1-249-439-11	CARBON	68K	5%	1/4W	
R921	1-249-422-11	CARBON	2.7K	5%	1/4W	
R922	1-249-425-11	CARBON	4.7K	5%	1/4W	
R923	1-249-431-11	CARBON	15K	5%	1/4W	
⚠R924	1-215-890-11	METAL OXIDE	470	5%	2W	F
R942	1-249-429-11	CARBON	10K	5%	1/4W	
R943	1-249-426-11	CARBON	5.6K	5%	1/4W	
⚠R944	1-212-897-00	FUSIBLE	470	5%	1/4W	F
R951	1-249-417-11	CARBON	1K	5%	1/4W	
R952	1-249-438-11	CARBON	56K	5%	1/4W	
R953	1-249-418-11	CARBON	1.2K	5%	1/4W	
R954	1-249-438-11	CARBON	56K	5%	1/4W	
R956	1-249-421-11	CARBON	2.2K	5%	1/4W	
R957	1-249-421-11	CARBON	2.2K	5%	1/4W	
R962	1-249-417-11	CARBON	1K	5%	1/4W	
R963	1-249-431-11	CARBON	15K	5%	1/4W	
R964	1-249-441-11	CARBON	100K	5%	1/4W	
R965	1-249-437-11	CARBON	47K	5%	1/4W	
⚠R966	1-217-151-00	RES, METAL PLATE	0.22			F
R967	1-260-076-11	CARBON	10	5%	1/2W	
⚠R999	1-212-881-11	FUSIBLE	100	5%	1/4W	F
		< RELAY >				
RY901	1-515-920-11	RELAY (24V)				

****

Ref.No.	Part No.	Description				Remark
*	A-4357-889-A	TC BOARD, COMPLETE				
		**********				
*	4-886-555-00	HEAT SINK				
	7-685-646-81	SCREW +BVTP	3X8	TYPE2		
		< CAPACITOR >				
C201	1-124-443-00	ELECT	100uF	20%	10V	
C202	1-124-443-00	ELECT	100uF	20%	10V	
C203	1-124-907-11	ELECT	10uF	20%	50V	
C204	1-124-902-00	ELECT	0.47uF	20%	50V	
C205	1-164-159-11	CERAMIC	0.1uF		50V	
C206	1-126-103-11	ELECT	470uF	20%	16V	
C207	1-164-159-11	CERAMIC	0.1uF		50V	
C316	1-124-443-00	ELECT	100uF	20%	10V	
C317	1-124-443-00	ELECT	100uF	20%	10V	
C318	1-124-903-11	ELECT	1uF	20%	50V	
C321	1-124-907-11	ELECT	10uF	20%	50V	
C322	1-106-359-00	MYLAR	4700PF	5%	200V	
C323	1-162-290-31	CERAMIC	470PF	10%	50V	
C324	1-124-907-11	ELECT	10uF	20%	50V	
C325	1-136-165-00	FILM	0.1uF	5%	50V	
C326	1-124-903-11	ELECT	1uF	20%	50V	
C327	1-124-902-00	ELECT	0.47uF	20%	50V	
C328	1-124-903-11	ELECT	1uF	20%	50V	
C329	1-124-907-11	ELECT	10uF	20%	50V	
C330	1-124-443-00	ELECT	100uF	20%	10V	
C371	1-164-159-11	CERAMIC	0.1uF		50V	
C385	1-164-159-11	CERAMIC	0.1uF		50V	
C386	1-164-159-11	CERAMIC	0.1uF		50V	
C387	1-164-159-11	CERAMIC	0.1uF		50V	
C388	1-164-159-11	CERAMIC	0.1uF		50V	
C390	1-124-122-11	ELECT	100uF	20%	50V	
C421	1-124-907-11	ELECT	10uF	20%	50V	
C422	1-106-359-00	MYLAR	4700PF	5%	200V	
C423	1-162-290-31	CERAMIC	470PF	10%	50V	
C424	1-124-907-11	ELECT	10uF	20%	50V	
C425	1-136-165-00	FILM	0.1uF	5%	50V	
C426	1-124-903-11	ELECT	1uF	20%	50V	
C427	1-124-902-00	ELECT	0.47uF	20%	50V	
C428	1-124-903-11	ELECT	1uF	20%	50V	
C429	1-124-907-11	ELECT	10uF	20%	50V	
C430	1-124-443-00	ELECT	100uF	20%	10V	
C701	1-124-910-11	ELECT	47uF	20%	50V	
C702	1-124-477-11	ELECT	47uF	20%	25V	
C703	1-124-477-11	ELECT	47uF	20%	25V	

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.	Les components identifiés par une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

Ref.No.	Part No.	Description	Remark
		< CONNECTOR >	
CN201	1-695-338-11	PIN, CONNECTOR (PC BOARD) 15P	
CN202	1-695-334-11	PIN, CONNECTOR (PC BOARD) 11P	
CN203	1-695-344-11	PIN, CONNECTOR (PC BOARD) 21P	
CN204	1-766-527-11	SOCKET, CONNECTOR 17P	
*CN206	1-564-517-11	PLUG, CONNECTOR 2P	
		< DIODE >	
D201	8-719-200-82	DIODE 11ES2	
D202	8-719-987-63	DIODE 1N4148M	
D203	8-719-987-63	DIODE 1N4148M	
D204	8-719-987-63	DIODE 1N4148M	
D205	8-719-000-60	DIODE UZL-6M2	
D301	8-719-000-60	DIODE UZL-6M2	
D701	8-719-001-70	DIODE UZL-12M1	
		< FUSE >	
F701	1-532-782-11	FUSE, MICRO (SECONDARY)	
		< IC >	
IC201	8-759-283-58	IC M38122M2-067FP	
IC202	8-759-520-90	IC PST572E	
IC203	8-759-822-09	IC LB1641	
IC321	8-759-098-73	IC HA12172NT	
		< TRANSISTOR >	
Q201	8-729-119-76	TRANSISTOR 2SA1175-HFE	
Q202	8-729-620-05	TRANSISTOR 2SC2603-EF	
Q203	8-729-900-80	TRANSISTOR DTC114ES	
Q204	8-729-119-76	TRANSISTOR 2SA1175-HFE	
Q205	8-729-900-80	TRANSISTOR DTC114ES	
Q207	8-729-620-05	TRANSISTOR 2SC2603-EF	
Q227	8-729-620-05	TRANSISTOR 2SC2603-EF	
Q228	8-729-620-05	TRANSISTOR 2SC2603-EF	
Q229	8-729-620-05	TRANSISTOR 2SC2603-EF	
Q230	8-729-620-05	TRANSISTOR 2SC2603-EF	
Q231	8-729-620-05	TRANSISTOR 2SC2603-EF	
Q233	8-729-900-65	TRANSISTOR DTA144ES	
Q234	8-729-902-80	TRANSISTOR DTA114YS	
Q235	8-729-902-80	TRANSISTOR DTA114YS	
Q421	8-729-620-05	TRANSISTOR 2SC2603-EF	
Q422	8-729-620-05	TRANSISTOR 2SC2603-EF	
Q624	8-729-801-93	TRANSISTOR 2SD1387-3	
Q625	8-729-900-80	TRANSISTOR DTC114ES	
Q701	8-729-620-05	TRANSISTOR 2SC2603-EF	
Q702	8-729-209-15	TRANSISTOR 2SD2012	

Ref.No.	Part No.	Description			Remark
		< RESISTOR >			
R201	1-249-429-11	CARBON	10K	5%	1/4W
R202	1-249-429-11	CARBON	10K	5%	1/4W
R203	1-249-429-11	CARBON	10K	5%	1/4W
R204	1-249-429-11	CARBON	10K	5%	1/4W
R205	1-247-887-00	CARBON	220K	5%	1/4W
R206	1-247-887-00	CARBON	220K	5%	1/4W
R207	1-249-429-11	CARBON	10K	5%	1/4W
R208	1-249-429-11	CARBON	10K	5%	1/4W
R209	1-249-429-11	CARBON	10K	5%	1/4W
R210	1-249-425-11	CARBON	4.7K	5%	1/4W
R211	1-249-429-11	CARBON	10K	5%	1/4W
R212	1-247-903-00	CARBON	1M	5%	1/4W
R213	1-249-429-11	CARBON	10K	5%	1/4W
R214	1-249-429-11	CARBON	10K	5%	1/4W
R215	1-249-417-11	CARBON	1K	5%	1/4W
R216	1-249-417-11	CARBON	1K	5%	1/4W
R217	1-249-417-11	CARBON	1K	5%	1/4W
R218	1-249-417-11	CARBON	1K	5%	1/4W
R219	1-249-417-11	CARBON	1K	5%	1/4W
R220	1-249-411-11	CARBON	330	5%	1/4W
R221	1-249-411-11	CARBON	330	5%	1/4W
R222	1-249-411-11	CARBON	330	5%	1/4W
R223	1-247-856-00	CARBON	11K	5%	1/4W
R224	1-249-432-11	CARBON	18K	5%	1/4W
R225	1-249-414-11	CARBON	560	5%	1/4W
R226	1-249-421-11	CARBON	2.2K	5%	1/4W
R227	1-247-807-31	CARBON	100	5%	1/4W
R228	1-247-807-31	CARBON	100	5%	1/4W
R229	1-247-807-31	CARBON	100	5%	1/4W
R230	1-247-807-31	CARBON	100	5%	1/4W
R231	1-247-807-31	CARBON	100	5%	1/4W
R232	1-247-807-31	CARBON	100	5%	1/4W
R233	1-249-437-11	CARBON	47K	5%	1/4W
R234	1-249-437-11	CARBON	47K	5%	1/4W
R235	1-249-436-11	CARBON	39K	5%	1/4W
R236	1-249-436-11	CARBON	39K	5%	1/4W
R237	1-249-417-11	CARBON	1K	5%	1/4W
R238	1-249-425-11	CARBON	4.7K	5%	1/4W
R239	1-249-425-11	CARBON	4.7K	5%	1/4W
R240	1-249-425-11	CARBON	4.7K	5%	1/4W
R241	1-249-429-11	CARBON	10K	5%	1/4W
R243	1-247-807-31	CARBON	100	5%	1/4W
R244	1-247-807-31	CARBON	100	5%	1/4W
R245	1-247-807-31	CARBON	100	5%	1/4W
R246	1-247-807-31	CARBON	100	5%	1/4W
R247	1-247-811-31	CARBON	150	5%	1/4W
R248	1-247-811-31	CARBON	150	5%	1/4W
R249	1-247-811-31	CARBON	150	5%	1/4W

TC **TCB**

Ref.No.	Part No.	Description			Remark
R250	1-249-409-11	CARBON	220	5%	1/4W
R251	1-249-409-11	CARBON	220	5%	1/4W
R321	1-249-430-11	CARBON	12K	5%	1/4W
R322	1-249-431-11	CARBON	15K	5%	1/4W
R323	1-249-428-11	CARBON	8.2K	5%	1/4W
R324	1-247-840-00	CARBON	2.4K	5%	1/4W
R325	1-249-433-11	CARBON	22K	5%	1/4W
R326	1-249-432-11	CARBON	18K	5%	1/4W
R327	1-249-425-11	CARBON	4.7K	5%	1/4W
R328	1-249-421-11	CARBON	2.2K	5%	1/4W
R334	1-249-421-11	CARBON	2.2K	5%	1/4W
R335	1-249-421-11	CARBON	2.2K	5%	1/4W
R371	1-215-451-00	METAL	18K	1%	1/6W
R372	1-249-429-11	CARBON	10K	5%	1/4W
R373	1-249-429-11	CARBON	10K	5%	1/4W
R374	1-249-429-11	CARBON	10K	5%	1/4W
R375	1-249-429-11	CARBON	10K	5%	1/4W
R376	1-249-429-11	CARBON	10K	5%	1/4W
R377	1-249-429-11	CARBON	10K	5%	1/4W
R378	1-249-425-11	CARBON	4.7K	5%	1/4W
R379	1-249-429-11	CARBON	10K	5%	1/4W
R380	1-249-417-11	CARBON	1K	5%	1/4W
R381	1-247-864-11	CARBON	24K	5%	1/4W
R382	1-249-434-11	CARBON	27K	5%	1/4W
R383	1-249-441-11	CARBON	100K	5%	1/4W
R384	1-249-429-11	CARBON	10K	5%	1/4W
R421	1-249-430-11	CARBON	12K	5%	1/4W
R422	1-249-431-11	CARBON	15K	5%	1/4W
R423	1-249-428-11	CARBON	8.2K	5%	1/4W
R424	1-247-840-00	CARBON	2.4K	5%	1/4W
R425	1-249-433-11	CARBON	22K	5%	1/4W
R426	1-249-432-11	CARBON	18K	5%	1/4W
R427	1-249-425-11	CARBON	4.7K	5%	1/4W
R428	1-249-421-11	CARBON	2.2K	5%	1/4W
R626	1-249-429-11	CARBON	10K	5%	1/4W
R701	1-249-425-11	CARBON	4.7K	5%	1/4W
		< VARIABLE RESISTOR >			
RV341	1-241-785-11	RES, ADJ, CARBON 10K			
RV441	1-241-785-11	RES, ADJ, CARBON 10K			
		< VIBRATOR >			
X201	1-577-358-21	VIBRATOR, CERAMIC (4MHz)			

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Ref.No.	Part No.	Description			Remark
*	A-4303-462-A	TCB BOARD, COMPLETE			
		**********			
		< CAPACITOR >			
C1	1-126-934-11	CAP, ELECT 220uF			
C2	1-163-031-11	CAP,CHIP CERAMIC 0.01uF F 2125			
C3	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V
C5	1-163-031-11	CAP,CHIP CERAMIC 0.01uF F 2125			
C6	1-163-091-00	CERAMIC CHIP	8PF		50V
C7	1-163-227-11	CAP,CHIP CERAMIC 10PF CH 2125			
C21	1-163-099-00	CERAMIC CHI	18PF	5%	50V
C22	1-163-099-00	CERAMIC CHI P	18PF	5%	50V
C23	1-163-031-11	CAP,CHIP CERAMIC 0.01uF F 2125			
C24	1-163-031-11	CAP,CHIP CERAMIC 0.01uF F 2125			
C25	1-163-031-11	CAP,CHIP CERAMIC 0.01uF F 2125			
C26	1-164-346-11	CAP,CHIP CERAMIC 1.0uF F(2125)			
C27	1-124-257-00	ELECT	2.2uF	20%	50V
C28	1-163-031-11	CAP,CHIP CERAMIC 0.01uF F 2125			
C29	1-163-031-11	CAP,CHIP CERAMIC 0.01uF F 2125			
C31	1-124-257-00	ELECT	2.2uF	20%	50V
C32	1-163-031-11	CAP,CHIP CERAMIC 0.01uF F 2125			
C33	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C34	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C51	1-163-031-11	CAP,CHIP CERAMIC 0.01uF F 2125			
C52	1-126-162-11	ELECT	3.3uF	20%	50V
C53	1-163-031-11	CAP,CHIP CERAMIC 0.01uF F 2125			
C54	1-163-031-11	CAP,CHIP CERAMIC 0.01uF F 2125			
C55	1-163-105-00	CERAMIC CHIP	33PF	5%	50V
C57	1-164-346-11	CAP,CHIP CERAMIC 1.0uF F(2125)			
C58	1-164-346-11	CAP,CHIP CERAMIC 1.0uF F(2125)			
C59	1-164-346-11	CAP,CHIP CERAMIC 1.0uF F(2125)			
C60	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C61	1-163-023-00	CERAMIC CHIP	0.015uF	5%	50V
C62	1-163-023-00	CERAMIC CHIP	0.015uF	5%	50V
C63	1-126-301-11	ELECT	1uF	20%	50V
C64	1-126-301-11	ELECT	1uF	20%	50V
C65	1-126-301-11	ELECT	1uF	20%	50V
C66	1-126-301-11	ELECT	1uF	20%	50V
C70	1-163-031-11	CAP,CHIP CERAMIC 0.01uF F 2125			
C71	1-163-031-11	CAP,CHIP CERAMIC 0.01uF F 2125			
C72	1-126-934-11	CAP, ELECT	220uF		
C73	1-124-257-00	ELECT	2.2uF	20%	50V
C74	1-163-031-11	CAP,CHIP CERAMIC 0.01uF F 2125			
C75	1-126-157-11	ELECT	10uF	20%	16V
C76	1-126-933-11	CAP, ELECT	100uF		
C77	1-163-117-00	CERAMIC CHIP	100PF	5%	50V
C78	1-163-031-11	CAP,CHIP CERAMIC 0.01uF F 2125			
C79	1-126-157-11	ELECT	10uF	20%	16V
C80	1-126-925-11	CAP, ELECT	470uF		

Ref.No.	Part No.	Description	Remark
C81	1-163-031-11	CAP,CHIP CERAMIC 0.01uF F 2125	
C82	1-163-031-11	CAP,CHIP CERAMIC 0.01uF F 2125	
C86	1-163-016-00	CERAMIC CHIP 0.0039uF 10%	50V
C87	1-163-016-00	CERAMIC CHIP 0.0039uF 10%	50V
		< FILTER >	
CF1	1-567-389-11	FILTER, CERAMIC	
CF51	1-567-389-11	FILTER, CERAMIC	
		< CONNECTOR >	
*CN3	1-537-613-11	TERMINAL (8P)	
		< DIODE >	
D21	8-719-422-46	DIODE MA8056	
D51	8-719-016-74	DIODE 1SS352	
		< FRONTEND >	
FE1	1-465-673-11	FRONT END (2 BAND)	
FE2	1-239-260-11	ENCAPSULATED COMPONENT	
		< IC >	
IC21	8-759-821-43	IC LC7218M	
IC51	8-759-823-68	IC LA1851NM	
		< IFT >	
IFT51	1-406-821-11	COIL (DISCRIMINATOR)	
IFT52	1-404-713-11	TRANSFORMER, IF	
		< JUMPER RESISTOR >	
JW1	1-216-295-91	RES, CHIP 0	
JW2	1-216-295-91	RES, CHIP 0	
JW4	1-216-295-91	RES, CHIP 0	
JW5	1-216-295-91	RES, CHIP 0	
JW6	1-216-295-91	RES, CHIP 0	
		< COIL >	
L51	1-408-798-00	CHIP INDUCTOR 1mH	
		< FILTER >	
LPF51	1-239-597-11	FILTER, LOW PASS	
LPF52	1-239-597-11	FILTER, LOW PASS	
		< TRANSISTOR >	
Q1	8-729-804-72	TRANSISTOR 2SC2814-F4	
Q3	8-729-810-16	TRANSISTOR 2SA1678	
Q21	8-729-602-21	TRANSISTOR 2SC4154-F	
Q22	8-729-232-69	TRANSISTOR 2SK208GR3	
Q23	8-729-232-59	TRANSISTOR 2SC4666B	

Ref.No.	Part No.	Description	Remark
Q51	8-729-602-21	TRANSISTOR 2SC4154-F	
Q52	8-729-602-21	TRANSISTOR 2SC4154-F	
Q53	8-729-810-28	TRANSISTOR 2SC4398	
		< RESISTOR >	
R1	1-216-037-00	METAL CHIP 330 5%	1/10W
R2	1-216-037-00	METAL CHIP 330 5%	1/10W
R3	1-216-109-00	METAL CHIP 330K 5%	1/10W
R4	1-216-037-00	METAL CHIP 330 5%	1/10W
R7	1-216-017-00	METAL CHIP 47 5%	1/10W
R9	1-216-089-00	RES, CHIP 47K	
R10	1-216-097-00	METAL CHIP 100K 5%	1/10W
R21	1-216-049-00	METAL CHIP 1K 5%	1/10W
R22	1-216-049-00	METAL CHIP 1K 5%	1/10W
R23	1-216-049-00	METAL CHIP 1K 5%	1/10W
R24	1-216-025-00	METAL CHIP 100 5%	1/10W
R25	1-216-065-00	METAL CHIP 4.7K 5%	1/10W
R26	1-216-049-00	METAL CHIP 1K 5%	1/10W
R28	1-216-073-00	METAL CHIP 10K 5%	1/10W
R29	1-216-025-00	METAL CHIP 100 5%	1/10W
R30	1-216-061-00	METAL CHIP 3.3K 5%	1/10W
R31	1-216-043-00	METAL CHIP 560 5%	1/10W
R32	1-216-049-00	METAL CHIP 1K 5%	1/10W
R33	1-216-035-00	METAL CHIP 270 5%	1/10W
R34	1-216-065-00	METAL CHIP 4.7K 5%	1/10W
R35	1-216-057-00	METAL CHIP 2.2K 5%	1/10W
R36	1-216-065-00	METAL CHIP 4.7K 5%	1/10W
R37	1-216-065-00	METAL CHIP 4.7K 5%	1/10W
R38	1-216-025-00	METAL CHIP 100 5%	1/10W
R51	1-216-049-00	METAL CHIP 1K 5%	1/10W
R52	1-216-081-00	METAL CHIP 22K 5%	1/10W
R53	1-216-085-00	METAL CHIP 33K 5%	1/10W
R54	1-216-071-00	METAL CHIP 8.2K 5%	1/10W
R55	1-216-075-00	METAL CHIP 12K 5%	1/10W
R57	1-216-073-00	METAL CHIP 10K 5%	1/10W
R58	1-216-066-00	METAL CHIP 5.1K 5%	1/10W
R59	1-216-065-00	METAL CHIP 4.7K 5%	1/10W
R60	1-216-065-00	METAL CHIP 4.7K 5%	1/10W
R61	1-216-115-00	METAL CHIP 560K 5%	1/10W
R62	1-216-115-00	METAL CHIP 560K 5%	1/10W
R63	1-216-049-00	METAL CHIP 1K 5%	1/10W
R64	1-216-049-00	METAL CHIP 1K 5%	1/10W
R65	1-216-073-00	METAL CHIP 10K 5%	1/10W
R66	1-216-073-00	METAL CHIP 10K 5%	1/10W
R67	1-216-057-00	METAL CHIP 2.2K 5%	1/10W
R68	1-216-057-00	METAL CHIP 2.2K 5%	1/10W
R69	1-216-025-00	METAL CHIP 100 5%	1/10W
R70	1-216-025-00	METAL CHIP 100 5%	1/10W
R71	1-216-089-00	RES, CHIP 47K	

TCB TC FUTA TC SW

Ref.No.	Part No.	Description				Remark
R72	1-216-073-00	METAL CHIP	10K	5%	1/10W	
R73	1-216-073-00	METAL CHIP	10K	5%	1/10W	
R74	1-216-013-00	METAL CHIP	33	5%	1/10W	
		< VARIABLE RESISTOR >				
RV51	1-238-601-11	RES, ADJ, CARBON 22K				
RV52	1-238-601-11	RES, ADJ, CARBON 22K				
RV53	1-238-598-11	RES, ADJ, CARBON 2.2K				
		< TEST PIN >				
TP51	1-564-505-11	PLUG, CONNECTOR 2P				
		< VIBRATOR >				
X21	1-579-585-11	VIBRATOR, CRYSTAL (7.2MHz)				
X51	1-577-075-11	OSCILLATOR, CERAMIC (456kHz)				
**********						
*	1-652-279-11	TC FUTA BOARD				
		**********				
		< CONNECTOR >				
CN9970	1-580-482-11	SOCKET, CONNECTOR 7P				
		< DIODE >				
D9070	8-719-301-43	LED	SEL2410E-C-TP6 (▷)			
D9080	8-719-301-43	LED	SEL2410E-C-TP6 (▷)			
D9090	8-719-301-43	LED	SEL2410E-C-TP6 (◁)			
D9100	8-719-301-43	LED	SEL2410E-C-TP6 (◁)			
		< JUMPER RESISTOR >				
JW9970	1-216-295-91	METAL GLAZE	0	5%	1/10W	
		< RESISTOR >				
R9010	1-216-051-00	METAL CHIP	1.2K	5%	1/10W	
R9020	1-216-055-00	METAL CHIP	1.8K	5%	1/10W	
R9030	1-216-051-00	METAL CHIP	1.2K	5%	1/10W	
R9150	1-216-037-00	METAL CHIP	330	5%	1/10W	
R9160	1-216-037-00	METAL CHIP	330	5%	1/10W	
R9200	1-216-295-91	METAL GLAZE	0	5%	1/10W	
R9210	1-216-037-00	METAL CHIP	330	5%	1/10W	
R9220	1-216-037-00	METAL CHIP	330	5%	1/10W	
R9230	1-216-295-00	METAL GLAZE	0	5%	1/10W	
R9240	1-216-295-00	METAL GLAZE	0	5%	1/10W	
R9250	1-216-295-00	METAL GLAZE	0	5%	1/10W	
		< SWITCH >				
S9010	1-554-303-21	SWITCH, TACTILE (■)				
S9020	1-554-303-21	SWITCH, TACTILE (▷)				
S9030	1-554-303-21	SWITCH, TACTILE (◁)				
S9040	1-554-303-21	SWITCH, TACTILE (◀◀)				
S9050	1-554-303-21	SWITCH, TACTILE (▶▶)				
**********						
*	A-4369-795-A	TC SW BOARD, COMPLETE				
		**********				
		< CONNECTOR >				
CN9980	1-580-482-11	SOCKET, CONNECTOR 7P				
CN9990	1-766-319-11	SOCKET, CONNECTOR 17P				
		< DIODE >				
D9010	8-719-032-87	LED	SE5420E-TP15 (▷)			
D9020	8-719-032-87	LED	SE5420E-TP15 (◁)			
D9030	8-719-033-06	LED	SEL5920A-TP15 (❚❚ PAUSE)			
D9040	8-719-032-83	LED	SEL5220S-TP15 (● REC)			
D9050	8-719-311-05	LED	SEL3213C-D (HIGH SPEED DUBBING)			
D9060	8-719-311-05	LED	SEL3213C-D (CD SYNCRO)			
		< JUMPER RESISTOR >				
JW9010	1-216-295-91	METAL GLAZE	0	5%	1/10W	
		< RESISTOR >				
R9040	1-216-055-00	METAL CHIP	1.8K	5%	1/10W	
R9050	1-216-059-00	METAL CHIP	2.7K	5%	1/10W	
R9060	1-216-083-00	METAL CHIP	27K	5%	1/10W	
R9070	1-216-051-00	METAL CHIP	1.2K	5%	1/10W	
R9080	1-216-055-00	METAL CHIP	1.8K	5%	1/10W	
R9090	1-216-059-00	METAL CHIP	2.7K	5%	1/10W	
R9100	1-216-051-00	METAL CHIP	1.2K	5%	1/10W	
R9110	1-216-055-00	METAL CHIP	1.8K	5%	1/10W	
R9120	1-216-059-00	METAL CHIP	2.7K	5%	1/10W	
R9140	1-216-065-00	METAL CHIP	4.7K	5%	1/10W	
R9170	1-216-037-00	METAL GLAZE	330	5%	1/10W	
R9180	1-216-037-00	METAL GLAZE	330	5%	1/10W	
R9190	1-216-037-00	METAL GLAZE	330	5%	1/10W	
		< SWITCH >				
S9060	1-554-303-21	SWITCH, TACTILE (● REC)				
S9070	1-554-303-21	SWITCH, TACTILE (❚❚ PAUSE)				
S9080	1-554-303-21	SWITCH, TACTILE (HIGH SPEED DUBBING)				
S9090	1-554-303-21	SWITCH, TACTILE (■)				
S9100	1-554-303-21	SWITCH, TACTILE (▷)				
S9110	1-554-303-21	SWITCH, TACTILE (◁)				
S9120	1-554-303-21	SWITCH, TACTILE (CD SYNCRO)				
S9130	1-554-303-21	SWITCH, TACTILE (◀◀)				
S9140	1-554-303-21	SWITCH, TACTILE (▶▶)				
S9150	1-692-503-11	SWITCH, SLIDE (DIRECTION)				
S9160	1-692-356-11	SWITCH, SLIDE (DOLBY NR)				
**********						

Ref.No.	Part No.	Description	Remark
*	1-652-291-11	TRANSFORMER BOARD	
		**********	
		< CONNECTOR >	
⚠CN901	1-564-321-00	PIN, CONNECTOR 2P	
*CN902	1-569-508-11	PIN, CONNECTOR 8P	
		< FUSE >	
⚠F901	1-576-103-11	FUSE (2A/250V)	
		< RESISTOR >	
⚠R900	1-202-725-00	SOLID 3.3M 10% 1/2W	
**********			
*	1-652-294-11	TRANSFORMER RELAY BOARD	
		**********	
		< CONNECTOR >	
*CN903	1-562-573-11	SOCKET, CONNECTOR 8P	
*CN904	1-569-508-11	PIN, CONNECTOR 8P	
		< FUSE >	
⚠F911	1-576-104-11	FUSE (1.6A/250V)	
⚠F912	1-576-104-11	FUSE (1.6A/250V)	
**********			
*	1-651-391-11	TRAY MOTOR BOARD	
		**********	
		< CAPACITOR >	
C502	1-164-159-11	CERAMIC 0.1uF 50V	
**********			
*	1-651-396-11	U/D MOTOR BOARD	
		**********	
		< CAPACITOR >	
C501	1-164-159-11	CERAMIC 0.1uF 50V	
**********			
*	1-652-292-11	VOLUME BOARD	
		**********	
		< CAPACITOR >	
C188	1-164-159-11	CERAMIC 0.1uF 50V	
C301	1-124-477-11	ELECT 47uF 20% 25V	
		< DIODE >	
D301	8-719-987-63	DIODE 1N4148M	

Ref.No.	Part No.	Description	Remark
		< IC >	
IC301	8-759-820-62	IC LB1639	
		< RESISTOR >	
R301	1-249-425-11	CARBON 4.7K 5% 1/4W	
R302	1-249-425-11	CARBON 4.7K 5% 1/4W	
**********			
		MISCELLANEOUS	
		**********	
10	1-765-497-11	WIRE (FLAT TYPE) (19 CORE)	
60	1-765-498-11	WIRE (FLAT TYPE) (21 CORE)	
63	1-765-495-11	WIRE (FLAT TYPE) (7 CORE)	
66	1-765-496-11	WIRE (FLAT TYPE) (17 CORE)	
70	1-765-503-11	WIRE (FLAT TYPE) (19 CORE)	
71	1-765-500-11	WIRE (FLAT TYPE) (7 CORE)	
109	1-751-820-11	WIRE (FLAT TYPE) (21 CORE)	
111	1-765-501-11	WIRE (FLAT TYPE) (11 CORE)	
112	1-765-502-11	WIRE (FLAT TYPE) (15 CORE)	
267	1-765-499-11	WIRE (FLAT TYPE) (22 CORE)	
312	1-452-719-11	MAGNET ASSY	
⚠355	8-848-144-11	DEVICE, OPTICAL KSS-240A	
356	1-575-001-11	WIRE, FLAT TYPE (12 CORE)	
HP101	1-500-093-11	HEAD, MAGNETIC (PLAYBACK) (DECK-A)	
HRPE101	1-500-094-11	HEAD, MAGNETIC (REC/PB/ERASE) (DECK-B)	
⚠J901	1-690-609-21	CORD, POWER	
M1	X-3369-110-1	MOTOR ASSY (CAPSTAN)	
M101	X-4917-523-3	MOTOR ASSY, DISC (SPINDLE)	
M102	X-4917-504-1	MOTOR ASSY (SLED)	
M2	X-3369-111-1	MOTOR ASSY (TRRIGER)	
M501	A-4660-642-A	MOTOR (U/D) ASSY	
M502	X-4944-463-1	MOTOR ASSY (TRAY)	
⚠T901	1-426-831-11	TRANSFORMER, POWER (US)	
⚠T901	1-426-832-11	TRANSFORMER, POWER (Canadian)	
**********			
		ACCESSORIES & PACKING MATERIALS	
		**********	
*	3-704-350-01	SHEET (STANDARD), PROTECTION	
*	4-967-340-01	CUSHION (FRONT)	
*	4-967-341-01	CUSHION (REAR)	
**********			

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.	Les components identifiés par une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

Ref.No.	Part No.	Description	Remark

****
HARDWARE LIST
****

#1	7-682-548-09	SCREW +BVTT 3X8 (S)
#2	7-685-646-79	SCREW +BVTP 3X8 TYPE2 N-S
#3	7-685-647-79	SCREW +BVTP 3X10 TYPE2 N-S
#4	7-685-650-79	SCREW +BVTP 3X16 TYPE2 IT-3
#5	7-685-646-81	SCREW +BVTP 3X8 TYPE2
#6	7-685-645-79	SCREW +BVTP 3X6 TYPE2 N-S
#7	7-682-548-04	SCREW +BVTT 3X8 (S)
#8	7-621-770-67	SCREW +BVTT 2.6X6 (S)
#9	7-685-533-19	SCREW +BTP 2.6X6 TYPE2 N-S
#10	7-623-921-01	RING, RETAINING, CAPSTAN
#11	7-685-534-19	SCREW +BTP 2.6X8 TYPE2 N-S
#12	7-621-775-00	SCREW +B 2.6X3
#13	7-621-775-10	SCREW +B 2.6X4
#14	7-682-547-09	SCREW +BVTT 3X6 (S)
#15	7-685-133-19	SCREW +BTP 2.6X6 TYPE2 N-S
#16	7-621-773-86	SCREW +B 2.6X4
#17	7-685-134-19	SCREW +BTP 2.6X8 TYPE2 N-S
#18	7-621-255-15	SCREW +P 2X3

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SONY

SERVICE MANUAL

US Model
Canadian Model

CORRECTION-1

Correct your service manual as shown below.

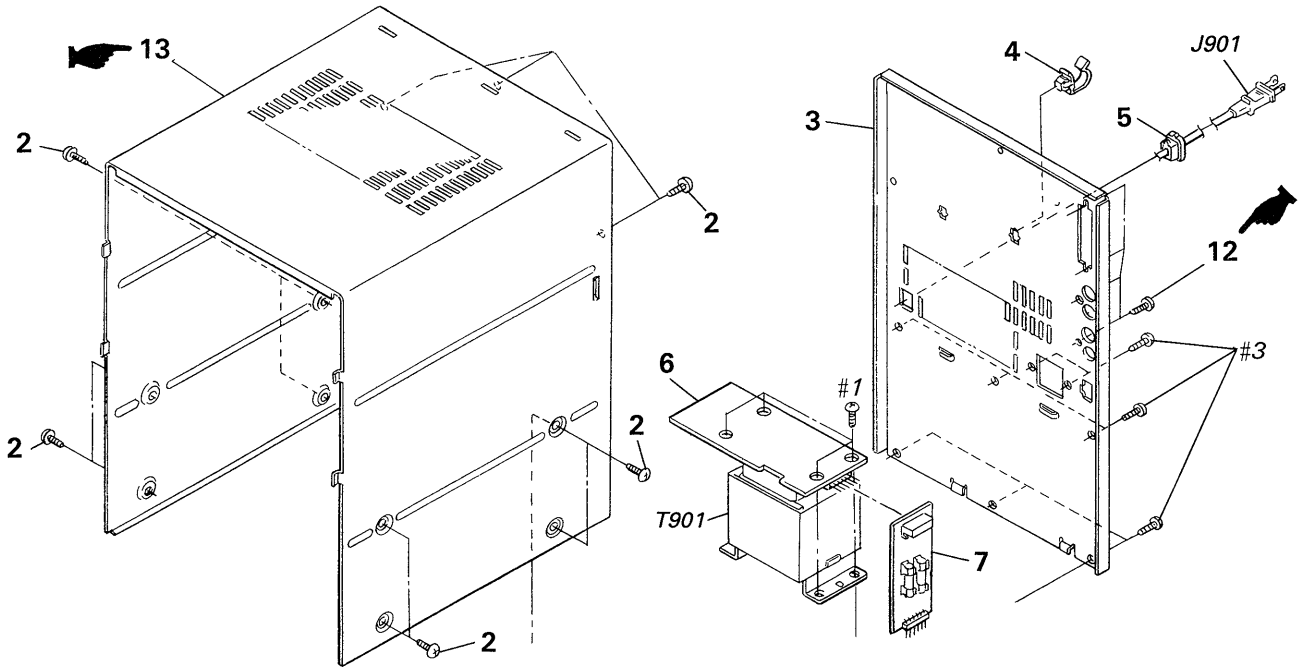
1. EXPLODED VIEWS

☛ : corrected portion

CD Section	Model Name Using Similar Mechanism	NEW
	CD Mechanism Type	CDM33-5BD3B
	Base Unit Name	BU-5BD3B
Tape deck Section	Model Name Using Similar Mechanism	TC-WR445
	Tape Transport Mechanism Type	TCM-220WR2 ☛

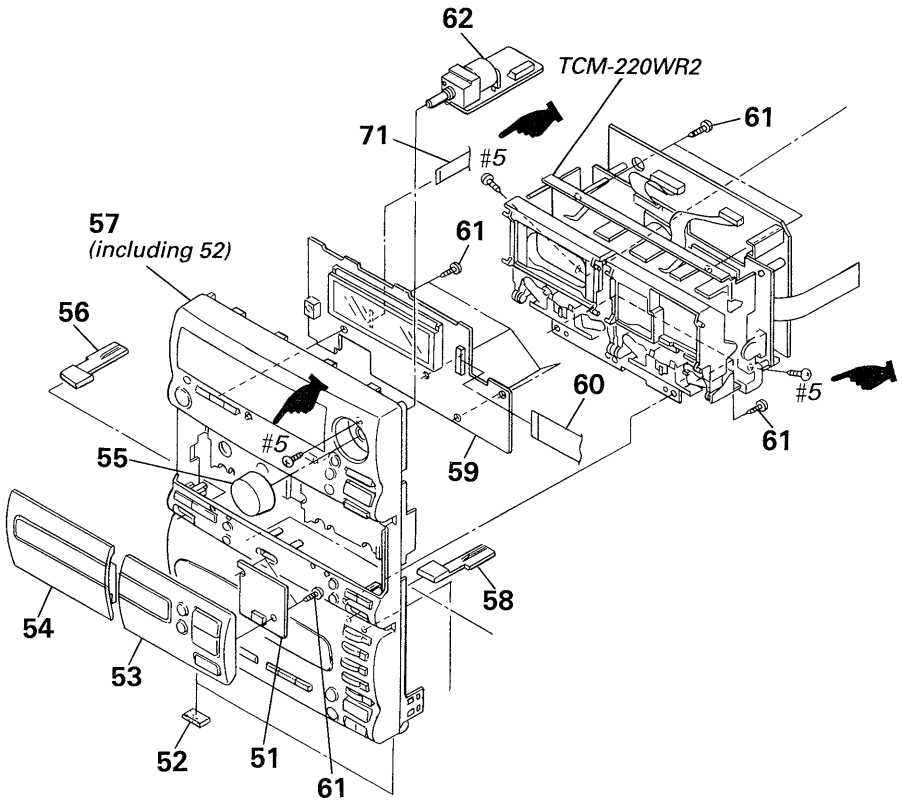
SECTION 5
EXPLODED VIEWS

5-1. CABINET SECTION (Service manual see page 67)

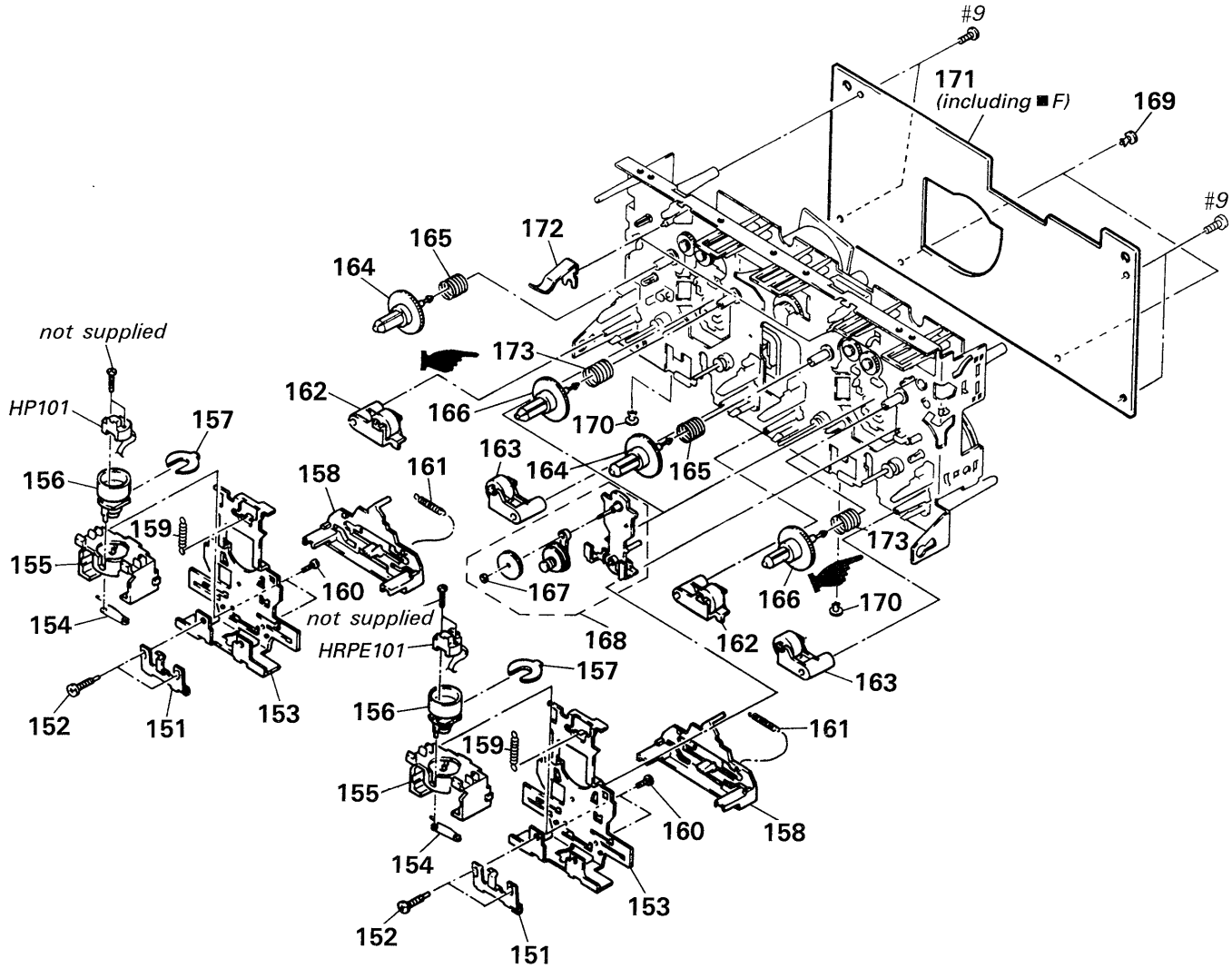


Page	Ref. No.	Incorrect	Correct
67	12	————	3-704-515-11 SCREW (BV/RING)
	13	————	4-965-816-11 CASE

5-2. CHASSIS SECTION (Service manual see page 68)



5-4. MECHANISM SECTION-2 (Service manual see page 70)
(TCM-220WR2)



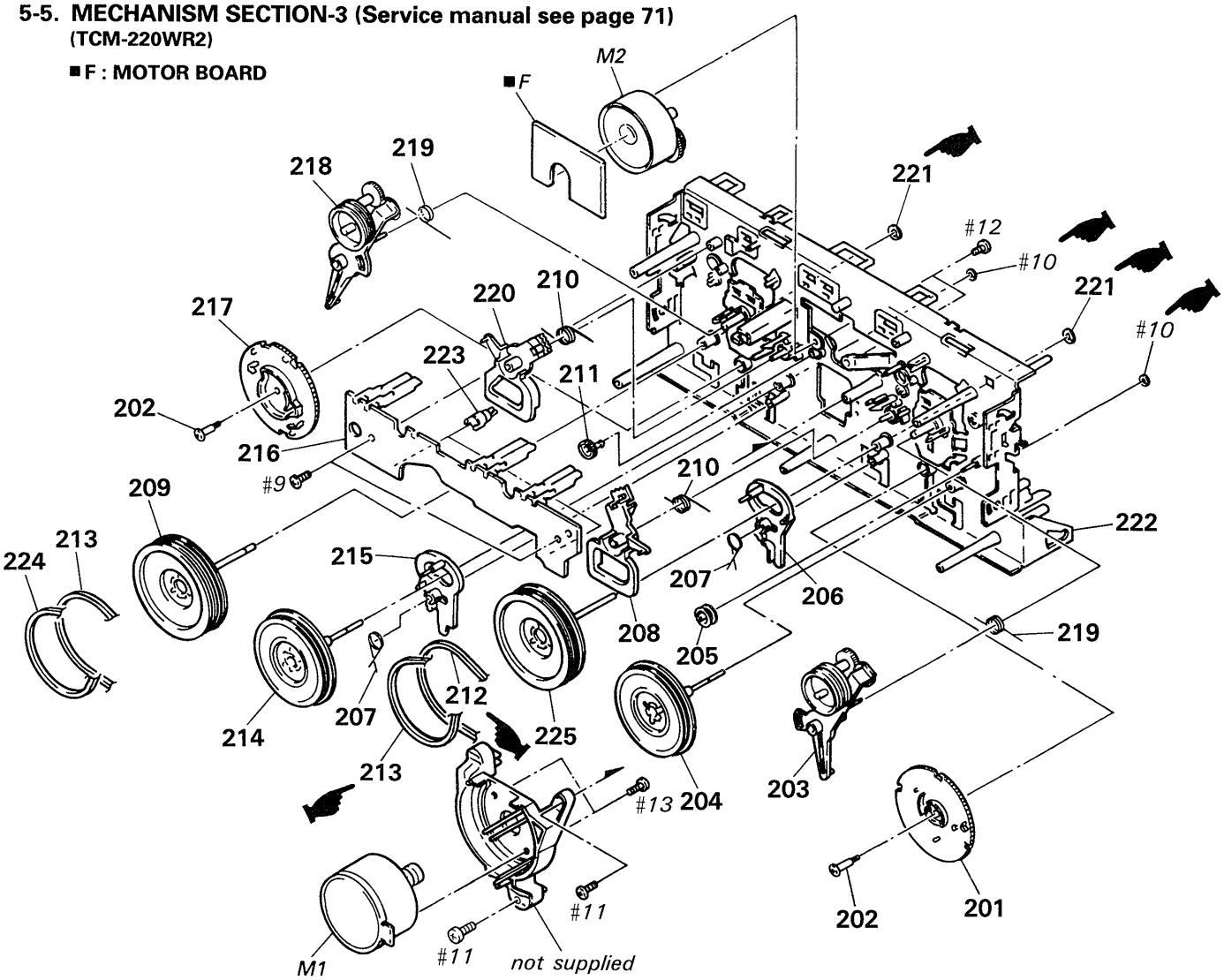
Page	Ref. No.	Incorrect	Correct
70	159	3-908-602-01 SPRING (HEAD), TENSION	3-917-143-01 SPRING, TENSION
	165	3-908-596-01 SPRING, (REEL), COMPRESSION	3-917-141-01 SPRING, COMPRESSION
	168	X-3367-592-2 TU ASSY	X-3369-315-1 TU ASSY
	173	————	3-917-142-01 SPRING, COMPRESSION

● Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.

5-5. MECHANISM SECTION-3 (Service manual see page 71)

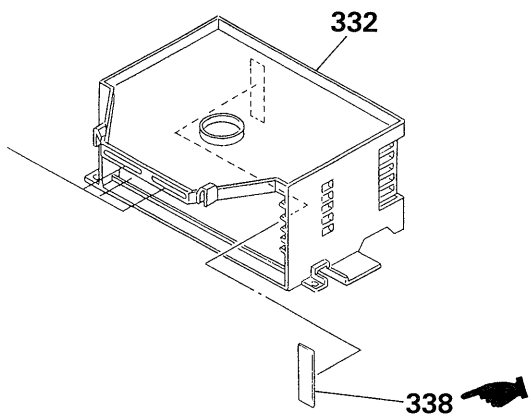
(TCM-220WR2)

■F : MOTOR BOARD



5-7. CD MECHANISM SECTION-2 (Service manual see page 73)

(CDM33-5BD3B)



Page	Ref. No.	Incorrect	Correct
83	338	————	*4-967-859-01 CUSHION

● Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.

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SERVICE MANUAL

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CORRECTION-2

Correct your service manual as shown below.

☛ : **indicates corrected portion.**

Page	INCORRECT			CORRECT	
	No.	Part No.	Description	Part No.	Description
67, 91	10	1-765-497-11	WIRE (FLAT TYPE) (19 CORE)	1-765-503-11 ☛	WIRE (FLAT TYPE) (19 CORE)
68, 91	70	1-765-503-11	WIRE (FLAT TYPE) (19 CORE)	1-765-497-11 ☛	WIRE (FLAT TYPE) (19 CORE)

(SPM-95013)

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US Model
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CORRECTION-3

Correct your service manual as shown below.

____ (Under line) : indicates corrected portion.

Page	INCORRECT			CORRECT		
	Ref. No.	Part No.	Description	Ref. No.	Part No.	Description
83	IC701	8-759-602-66	IC M5230L-A	IC701	8-759-231-53	IC TA7805S
83	IC702	8-759-231-53	IC TA7805S	IC702	8-759-602-66	IC M5230L-A

(SPM-96029)

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